California Environmental Protection Agency

Air Resources Board

Public Meeting to Consider the ARB/Railroad Statewide Agreement

Release Date: October 13, 2005

State of California
California Environmental Protection Agency
AIR RESOURCES BOARD
Stationary Source Division

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Date of Release: October 13, 2005
Board Meeting Date: October 27, 2005

Location:

Air Resources Board – Auditorium
9530 Telstar Avenue
El Monte, California 91731

Acknowledgments

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EXECUTIVE SUMMARY

On June 24, 2005, the Executive Officer of the Air Resources Board (ARB or Board) entered into a pollution reduction agreement with Union Pacific Railroad (UP) and BNSF Railway (BNSF). The Agreement secured the commitment of UP and BNSF to expeditiously implement a number of feasible and cost-effective measures to reduce emissions from locomotives throughout California. The Agreement initiated cooperative efforts between the railroads and the ARB to assess and mitigate public health risks around 17 major rail yards throughout the State. The Agreement also includes provisions for ongoing public involvement at each major rail yard, where community and environmental justice concerns can be addressed directly.

The Agreement leaves intact all authority and discretion that existed prior to its enactment. It does not affect the enforcement of State or local air district opacity or nuisance requirements, and does not preclude further regulatory actions within the existing legal authority of the Board or local air districts. The state legislature is also free to act as it sees fit. However, the UP and BNSF entered into the Agreement in large part because they desired to implement uniform measures statewide, and they retained the option to be released from individual elements of the Agreement, if they are subject to new overlapping requirements via local or State actions.

The voluntary agreement was developed through direct negotiations between the railroads and ARB staff (staff). The Board and the public were briefed on this process at the Board meeting in February 2005 and informed that these efforts were intended as near term actions to reduce locomotive emissions. However, outside parties were not participants in the negotiations and the details of the Agreement were not disclosed until the negotiations had been completed.

After the announcement of the Agreement, a number of community and environmental organizations, local air districts, and state legislators expressed numerous concerns. These included objections that the process for developing the Agreement did not provide for public participation, that the content of the Agreement was inadequate, and that the Agreement would jeopardize efforts by State legislators and local air districts to control railroad emissions in a different way.

In response to these concerns, the Board took several actions. At it's July meeting, the Board adopted Resolution 05-40 which provides that the Executive Officer may enter into future agreements with air pollution sources for emissions reductions or amendments to such existing agreements, subject to the condition that they be approved by the Board. In addition, the Board directed the Executive Officer to notify the Board and the public before commencing negotiations, to solicit public comments on the subject of the agreement, and to provide periodic reports to the Board.

The Board also decided to review the recent railroad Agreement, directed staff to conduct two public meetings to share background information on the Agreement, and solicit comments from the public and other interested stakeholders. The public meetings were held on August 10 in Sacramento and August 31 in Commerce. The Board also committed to conduct a special Board meeting in Southern California to receive public comment on the Agreement and determine how to proceed relative to the current Agreement.

The Board meeting is scheduled for October 27, 2005, at the ARB offices in El Monte. This staff report has been developed to explain the background, context, and provisions of the Agreement and summarize and respond to the comments received by staff.

Major Provisions of the Agreement

The Agreement establishes a statewide program to reduce diesel particulate emissions from locomotives at the State's rail yards by:

- Phasing out non-essential idling by locomotives within six months;
- Installing idling reduction devices on California-based locomotives within 3 years;
- Identifying and expeditiously repairing locomotives with excessive smoke; and
- Maximizing the use of ultra low sulfur (15 parts per million (ppm)) diesel fuel by January 1, 2007, six years before such fuel is required by federal regulation.

When fully implemented, these aspects of the Agreement are expected to achieve a 20 percent reduction in locomotive diesel particulate matter emissions near rail yards.

In addition to the statewide idling restrictions, cleaner fuel, and smoke repair requirements, many rail yards throughout the State are covered by additional elements of the Agreement. Program Coordinators are required at each of the 32 covered yards and they are responsible for implementing and insuring compliance with the idling and visible emission elements. At the 17 largest rail yards, known as Designated Rail Yards, the railroads have committed to evaluating and reducing pollution risks. Under the Agreement, the railroads will meet with local communities and local air districts at these 17 yards to develop near-term mitigation measures that can be implemented to reduce emissions and risk. The railroads will also develop information so that the ARB can perform health risk assessments to characterize and quantify the risk from these rail yards. These assessments will then be used to identify further mitigation measures. Public participation is required at each yard during each of these efforts.

The Agreement includes a commitment to evaluate remote sensing technology to identify in-use locomotives with excessive emissions. The Agreement also commits $3.5 million by the railroads to continue evaluating the feasibility of installing diesel particulate traps on locomotives, and evaluate other technologies, such as hybrid and alternative fueled locomotives, to further reduce locomotive emissions.

Failure by the railroads to implement any of these actions is subject to penalties. Individual violations of the idling and repair provisions can result in fines of up to $1,200 per locomotive, per day. Violations of major program elements, including failure to implement specific requirements, can result in penalties of up to $40,000 per month per element.

Public Participation as Part of the Agreement

Both UP and BNSF have committed to a process of outreach and communication with the communities and the local air districts affected by their operations at the 17 major rail yards. Staff has also committed to participate in this outreach effort. This effort is intended to ensure that local communities and others can have a meaningful role in determining what specific actions are taken to reduce emissions on a rail yard by rail yard basis. Under the Agreement, the railroads are obligated to:

- Meet with community members to identify measures to reduce the impact of rail yard emissions on adjacent residential neighborhoods;
- Provide periodic progress reports to community representatives on the implementation of risk mitigation plans and preparation of risk assessments;
- Meet with representatives from the affected community, staff, and the local air district to discuss the results of the draft health risk assessment for each yard;
- Upon completion of risk assessments, hold meetings within 60 days to discuss the findings and gain community input on mitigation measures;
- Involve community representatives in semi-annual meetings on efforts to develop and deploy new technologies to reduce locomotive emissions; and
- Establish a system to enable local residents to voluntarily report locomotives that do not comply with smoke limits or idling restrictions.

Staff is also committed to working with community residents and local air districts to implement various actions related to the Agreement. These include:

- Working cooperatively with local air districts to establish uniform health risk assessment guidelines;
- Providing for a public review of health risk assessment guidelines;
- Working cooperatively with local air districts to evaluate, and where appropriate, partner on, medium- and longer-term control technology assessments and demonstrations, and;
- Working cooperatively with local air districts to seek funding on mitigation measures.

ARB's Comprehensive Program for Addressing Rail Yard Emissions

The Agreement is one part of ARB's comprehensive program to reduce emissions from railroad operations. The major elements, described below, include:

- Accelerate locomotive turnover by 2010;
- Expedite statewide measures to reduce emissions near rail yards;
- Perform yard by yard risk assessment and mitigation;
- Adopt national "Tier 3" locomotive standards and accelerate the introduction of Tier 3 locomotives into California;
- Adopt and implement ARB rules to limit emissions from intermodal equipment at rail yards; and
- Other measures identified in the Business, Transportation, and Housing Agency and California Environmental Protection Agency Goods Movement Action Plan.

In 1998, ARB established a memorandum of understanding (1998 MOU) with the railroads for the South Coast Air Basin (Basin) that requires the complete conversion to the cleanest available locomotives (Tier 2 locomotives) by 2010. The 1998 MOU achieved a vastly accelerated locomotive turnover schedule of five years versus the industry average of 30 years. It ensures a 65 percent reduction in locomotive emissions in the Basin from the pre-MOU baseline by 2010, and results in substantial statewide benefits as well. The MOU process was used because federal law preempts the State's authority to control emissions from new and in-use locomotive engines.

In October 2004, ARB completed the first-ever risk assessment of a major rail yard at the UP facility in Roseville. The study showed that there were localized risks in excess of 500 potential cancer cases per million people exposed. In addition, there were elevated risks to over 155,000 people living in the vicinity of the rail yard. These findings highlighted the need to seek emission reductions in the vicinity of rail yards throughout the State. As a result, staff began discussions with the railroads on what could be done rapidly to reduce the emissions around rail yards. The Agreement is the product of these efforts.

The emissions reductions achieved through the Agreement were viewed by staff and the railroads as the best way to make significant progress until far greater and essential emission reductions could be obtained through the deployment of new, far cleaner locomotives. To enable this, United States Environmental Protection Agency (U.S. EPA) needs to complete its rulemaking for Tier 3 locomotives, expected to be finalized in 2007. These new locomotives, once available, will enable very large reductions in diesel particulate matter and oxide of nitrogen emissions. Once the schedule for the availability of these locomotives is set, ARB and the railroads will need to replicate the 1998 agreement on a statewide basis, and agree to a schedule to expeditiously place these locomotives in California service.

The ARB is also exercising its regulatory authority to reduce emissions at rail yards both through the use of cleaner locomotive fuels and from other non-locomotive sources. In 2004, the Board approved requirements for the use of California diesel fuel in intrastate locomotives beginning in 2007. In December 2005, the Board will consider a control measure to greatly reduce emissions from cargo handling equipment at ports and intermodal rail yards. Staff has also begun preliminary work on another regulation to reduce both diesel PM and criteria pollutant emissions from other compression ignition off-road equipment throughout the State, some of which is used at non-intermodal rail yards. The Board is scheduled to consider this proposed regulation in 2006.

Finally, reducing emissions from rail operations has an important role in California's overall efforts to address the statewide emission impacts from goods movement. The ARB is developing a comprehensive plan to address emissions from goods movement as part of the Governor's Goods Movement Action Plan. This plan is expected to identify a number of strategies that will involve direct regulation actions, voluntary measures that may be developed through agreements with sources, and the use of State and federal incentive funds.

Why a Negotiated Agreement

ARB generally relies on rulemaking as the primary means to ensure emission reductions. Voluntary agreements are an option when the Board's legal authority to impose emission reductions by regulation is limited or unclear (see discussion below) and where there is a sincere commitment on industry's part to negotiate in good faith. Both factors were present in this case. This led staff to conclude that a voluntary agreement would enable California to obtain greater and quicker emission reductions and public health protections than could be obtained through any other process. Staff and the railroads focused on what actions could be taken quickly to address rail yard emissions, using a voluntary agreement to avoid unduly contentious or protracted rulemaking efforts and the likelihood of further delays due to legal challenges.

Why Federal Preemption Makes a Negotiated Agreement the Best Option

Federal law significantly restricts the abilities of states and local jurisdictions to control locomotive emissions, or to enforce rules that affect national railroad transportation. The 1990 federal Clean Air Act (CAA), prohibits states and political subdivisions from adopting or attempting to "enforce any standard or other requirement relating to the control of emissions…from new locomotives or new engines used in locomotives." (CAA section 209(e)(1)(B).)

Under its final rule for locomotives, the U.S. EPA interpreted the preemption broadly. In contrast to all other federal rules for non-road engines, U.S. EPA defined "new" to include not only factory-new locomotives, but also remanufactured locomotives and locomotive engines. The effect is that virtually all locomotives and engines are considered "new" for purposes of preemption, regardless of their age or mileage accumulation.

The authority to adopt regulations for locomotives is further constrained by other federal acts, including the Interstate Commerce Commission Termination Act of 1995 (the ICCTA; 49 U.S.C.A. section 10501 et seq.). Congress enacted the ICCTA, which effectively deregulated the rail and motor carrier industries, to ensure the economic viability of the two industries. As generally interpreted by the courts and the Surface Transportation Board (STB), the ICCTA has a broad preemption limiting states, and even conflicting federal programs, from adopting rules that affect national railroad transportation. Under section 10501, STB has exclusive and preemptive authority over interstate rail transportation and its operations, including the locomotives and railroad facilities. Federal courts have typically interpreted the preemption broadly and found that most state regulations directly affecting the railroads and their operations are preempted.

What this means is that states and local agencies have limited authority to require the railroads to mitigate emissions from locomotives. Rules have to be narrowly and carefully crafted to survive preemption, and this limits the emission reductions that can be obtained. While the ARB and local air districts may attempt to adopt broader regulatory requirements, it is highly likely that any significant requirement affecting locomotives would be challenged in court. This could result in a significant delay in implementation even if the rules survive. It is also quite possible that the railroads would be successful in their legal challenge of some aspects of even carefully crafted rules and the hoped for emission benefits would not be realized.

Because the Agreement avoids the limitations on effectiveness due to preemption, the legal uncertainties and the time consumed in contentious rulemaking, staff believes it was the superior approach and provides a greater potential for timely emission reductions that cannot be guaranteed by legislation, ARB regulation, or local air district rules.

Impact on ARB and Local District Authority

The local air districts' authority over rail yards and locomotives will not change as a result of the Agreement. Local air districts have the statutory authority to cite locomotive operators for visible emission violations as specified under Health and Safety Code section 41701, nuisance violations as specified under Health and Safety Code section 41700, or any other applicable statute, local air district rule, or regulation applicable to locomotives and rail yards that is not subject to federal preemption.

Also, by entering into the Agreement, ARB did not cede its right to exercise any of its authority over the railroads and rail yards to the extent it is not preempted. If the railroads fail to perform any of the obligations set forth in the Agreement, staff could recommend that the Board approve statewide regulations, again to the extent that they are not preempted, to attempt to achieve the benefits anticipated from the Agreement.

If a local air district adopts regulations that overlap an element covered by the Agreement, the railroads have the ability to opt out of their responsibility to implement that specific program element under the statewide Agreement through a release clause contained in the Agreement[1]. For instance, a local rule or regulation that addresses locomotive idling would allow the railroads to opt out of the idling restriction of the Agreement, either in that district or on a statewide basis. However, the other elements of the Agreement would remain in effect. Districts considering overlapping rules will need to consider the possibility that local rulemaking could result in the loss of certain local benefits from the statewide Agreement.

If the opt-out provisions were to be exercised by the railroads on a statewide basis, this could also result in the loss of benefits in other areas of the State outside the local air district that is pursuing its own regulations. However, the railroads would incur significant risk in exercising this option, knowing that other local air districts could decide that it is necessary to pursue local regulations. This could result in a patchwork of different regulations within the State, an outcome the railroads wish to avoid.

Potential Emission Reduction Impacts Associated with Rescinding the Agreement

The Agreement provides significant and immediate locomotive emission reductions that are needed to reduce exposure and risk around rail yards. Rescinding the Agreement will forfeit these emission reductions. There is little likelihood that they would be restored through a second negotiation with the railroads. Alternatively, rules approved by ARB or local air districts to control locomotive emissions would likely be challenged in court and possibly preempted, resulting in no emission reductions. At a minimum, the implementation of any ARB or local air district rule that successfully withstood a legal challenge would be significantly delayed. This would result in little or no emission reductions in the intervening period, as opposed to the immediate emission reductions provided by the Agreement.

Public Comments on the Agreement

As previously discussed, staff held two meetings (one in Sacramento and one in Commerce) to solicit public comments on the Agreement. Staff presented information on the program elements of the Agreement, discussed key issues, and accepted both verbal and written public comments. Approximately 100 people attended the meeting in Sacramento, and over 250 people attended the meeting in Commerce. Nearly 90 people testified on the Agreement, including 30 persons testifying as individuals or members of community groups, 28 elected officials, 7 representatives of local air districts, 18 environmental organizations, and 5 representatives of business groups, including the UP and BNSF railroads. A large majority of those providing testimony

[1] The rationale for including the release clause (commonly referred to by commenters as the "poison pill") in the Agreement is explained on Page ES 9.

expressed opposition to the Agreement and requested that the Board rescind the agreement. Many comments suggested that if the Agreement is not rescinded, it should be modified in various ways. Staff has categorized the comments received at the meetings into the following general comments, accompanied by short staff responses:

- *The Agreement is so flawed that it should be rejected by the Board and rescinded.*

The Agreement will obtain significant locomotive emissions reductions that are needed to reduce exposure and risk around rail yards. Rescinding the Agreement will forfeit these reductions, and there is little likelihood that they would be successfully restored through either a second negotiation or a rulemaking process.

- *It was inappropriate and bad public policy for the railroads and ARB to reach such an agreement with no opportunity for public comment and input. The exclusion of the public from the development process violated the Board's commitment to Environmental Justice and open participation.*

The Agreement was a negotiated document, entered into voluntarily between the railroads and ARB. There are wide differences among other parties related to both the acceptable content and appropriateness of any voluntary agreement dealing with railroad operations. Staff concluded it would be impossible to directly involve interested parties in the negotiations and reach any meaningful agreement. However, because public participation is critical at individual rail yards, the elements of the Agreement provide for significant community interaction, which had not occurred to date. Staff viewed the other aspects of the Agreement (idling, clean fuels and smoke reduction), whereby the railroads committed to statewide, unilateral actions to reduce emissions, as purely positive steps that could be pursued without extensive public debate.

- *It was not necessary for ARB staff to enter into an agreement with the railroads because ARB already has the legal authority to adopt regulations that achieve the same goals as the Agreement.*

The California Legislature has granted ARB broad authority to regulate locomotive emissions, and has specifically directed the ARB to achieve the maximum degree of emission reductions by the earliest practicable date from off-road equipment and vehicles, including locomotives. However, while this authority under State law is quite clear, preemption limitations at the federal level, which are supreme to State law, restrain the ability of ARB to engage in a regulatory approach targeting railroad emissions. These limitations meant that the Agreement, as opposed to regulation, was the preferable course of action to ensure timely and certain emission benefits from railroad operations.

- *The Agreement caused pending legislation supported by the South Coast District, and environmental and community groups to be withdrawn. The ARB should modify its opposition to these bills and support their passage as the appropriate mechanism to reduce emissions from railroad operations.*

There were three bills in this year's session of the Legislature that focused on pollution from railroad operations. The Administration opposed two of these bills: Assembly Bill (AB) 888 and Senate Bill (SB) 459. However, the opposition to these bills is not related to any element of the Agreement, and would have been the same in the absence of negotiation of the Agreement. The remaining bill, AB 1222, concerns remote sensing of locomotives and is anticipated by and consistent with the Agreement. AB 1222 was signed by the Governor on October 6, 2005, and will be implemented per the legislation.

- *The Agreement interferes with local rulemakings and is counter to the principle that local agencies have the right to pursue more stringent requirements than required statewide.*

The Agreement does not remove or restrict any local authorities. Local air districts maintain their authority to adopt appropriate rules and regulations consistent with the scope of their regulatory authority under State and federal law. However, the Agreement provides benefits that could be lost if local air districts decide to exercise their authority. Therefore, each agency will need to consider this factor prior to taking actions that overlap with the statewide agreement.

Railroad and rail yard operations, and their associated emission impacts, are statewide; staff believes there is substantial merit in taking a uniform approach relative to many aspects of rail operation. This approach is consistent with many California air pollution control programs addressing statewide sources, including fuel specifications, motor vehicle emission standards, and consumer products. A statewide approach also provides a uniform set of compliance requirements for railroads, allowing them to more effectively manage their operations and train employees to meet emission reduction obligations. This is important since train crews can traverse many different parts of the State over a short period of time, and compliance with a patchwork of different operational standards in different parts of the State would be very difficult and cumbersome for the railroads to implement.

- *The release clause should be deleted (the release clause allows the railroads to opt out of portions of the agreement if subject to overlapping local control. It is usually referred to by commenters as the "poison pill".)*

The railroads operate nationally and believe uniform operating requirements throughout the State are essential for a consistent and efficient mechanism to implement operational changes that produce emission reductions. Because of this, during the negotiations, the railroads indicated that any agreement had to ensure that they would not have to comply with multiple requirements within the State. Staff does not believe that the railroads would have entered any agreement that could obligate them to two overlapping and potentially inconsistent methods of control.

Much of the concern about the release clause is based on the ability of the railroads to exercise it on a statewide basis, even if overlapping requirements are being pursued in only one area. As stated previously, the railroads would incur significant risk in exercising this option, knowing that other local air districts could decide that it is in their interest to adopt their own local regulations. This could result in a patchwork of different regulations within the State. If the railroads decide to opt-out of an element of the Agreement because of a local action, staff believes that the best course is to work with the railroads to convince them it is in their interest to implement the Agreement in all other areas.

- *The Agreement is not stringent enough.*

The Agreement achieves very significant reductions and represents the maximum commitment staff could obtain through negotiations. The Agreement achieves emission benefits where they would otherwise be difficult or impossible for the ARB or local air districts to obtain via regulation. Staff believes that most of what could be achieved, both with respect to content and timing, is included in the Agreement.

- *The Agreement is not enforceable.*

The Agreement is enforceable at both the State and local level. Some elements, such as the locomotive idling provisions, can be enforced directly by either ARB or local air district staff upon completion of ARB developed enforcement training. Others, such as failure to comply with the repair requirements for locomotives with excessive visible emission, are subject to enforcement action exclusively by ARB staff. Additionally, specific recordkeeping requirements in the Agreement allow staff to ensure, on a regular basis, that the requirements in the Agreement are implemented. Violations of any of these provisions can result in escalating penalties that can become quite substantial. Failure on the part of the railroads to implement the necessary steps to meet the performance standards, training, or compliance date requirements of the Agreement can result in even more substantial penalties. Staff will monitor compliance with all provisions of the Agreement, and seek penalties as appropriate for failure to comply.

- *The penalties provided in the Agreement are not consistent with those provided in State law for violations of air pollution laws and regulations from other air pollution sources.*

Staff believes the penalty structure of the Agreement is adequate to ensure that the railroads fully implement and meet their obligations under the Agreement. This includes penalties of up to $1,200 per locomotive, per day, for both individual violations of either the idling or smoking locomotive repair provisions, as well as more substantial penalties of up to $40,000 per month for failure to implement specific program elements. While these penalties are neither as significant nor as prescriptive as those provided under State law for violations of State or local regulations, they represent the level of punitive action to which the railroads would agree for failure to meet any of their obligations under the Agreement. Also, staff believes these penalty amounts are consistent with the penalty assessments local air districts have historically collected through mutual settlement agreements with other sources under their jurisdiction for comparable emission violations.

Implementation of the Agreement

Staff has begun to implement the program elements of the Agreement on the agreed-upon schedule. This has included meetings with environmental organizations and local air districts to provide staff an opportunity to discuss the program elements of the Agreement and to hear comments and concerns. Through this process, staff has committed to work with communities and local air districts on the development of guidelines for the health risk assessments, the joint development of the statewide complaint-reporting process for locomotives and rail yards, and to cooperate on the evaluation of the feasibility of future emission control technologies.

To date, the railroads have met all of the commitments contained in the Agreement. This includes having provided information to staff identifying the Program Coordinators for the “Designated” and “Covered” rail yards, established a complaint reporting process for the community, and provided staff with an inventory of their intrastate (captive) locomotive fleet, including identifying which locomotives have already been equipped with anti-idling devices. The railroads have also submitted their plans to establish a visible emission reduction and repair program. In addition, the railroads have submitted their plans to train appropriate rail yard staff and train crews on the idling requirements of the Agreement, and the individual visible emission reduction and repair program plans. Staff will continue to work with the railroads to ensure that the program element commitments contained in the Agreement are satisfied.

Staff Recommendation

Staff recommends the Board direct staff to continue to implement the Agreement.

Staff also recommends the Board direct staff to:

- Clarify terms in the Agreement, so as to provide greater specificity to all interested stakeholders;
- Report back to the Board within 6 months and every year thereafter, on progress in implementing the program elements of the Agreements; and
- As part of the annual reports to the Board, provide an assessment of the efforts to work with communities, local air districts, and other interested stakeholders.

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APPENDICES

I. INTRODUCTION

This chapter provides an introduction and a review of recent activities concerning control of emissions from locomotives.

A. Previous Activities

The Federal Clean Air Act Amendments of 1990 preempt states and local authorities from regulating most aspects of emissions from locomotives. Because of this and other federal laws, Air Resources Board (ARB or Board) staff (staff) has negotiated two agreements with the railroads as the most effective method to reduce emissions from locomotives. ARB has also used its regulatory authority in a limited manner relative to fuel quality.

In 1998, United States Environmental Protection Agency (U.S. EPA), ARB, and the two Class I freight railroads (Union Pacific (UP) and BNSF Railway (BNSF)) entered into an agreement (1998 MOU) to reduce emissions from locomotives operating in the South Coast Air Quality Management District (SCAQMD). The agreement requires that by 2010, oxides of nitrogen (NOx) emissions from the locomotives operated by the Class I railroads be reduced by 65 percent. Without the 1998 MOU, these levels of emission reduction would not be expected until 2030.

In 2004, ARB adopted a regulation requiring the use of California (CARB) diesel in intrastate locomotives and marine harborcraft. Beginning on January 1, 2007, intrastate locomotives must use the same low sulfur (15 parts per million (ppm)), low aromatic hydrocarbon diesel fuel as motor vehicles. Federal low sulfur diesel fuel, which has no aromatic hydrocarbon specification and provides less benefit than CARB diesel fuel, is not required until 2012 for locomotives and marine vessels.

B. Recent Agreement and Issues

On June 24, 2005, the Executive Officer announced a pollution reduction agreement with UP and BNSF to establish a statewide rail yard agreement (Agreement) to begin to reduce diesel particulate matter (diesel PM) emissions from rail yards. A copy of the Agreement is provided in Appendix A. When fully implemented the Agreement is expected to reduce diesel PM emissions from locomotives primarily in and around rail yards by about 20 percent. The Agreement also requires health risk assessments at the larger rail yards and the railroads to enter into discussions with local communities, local air districts, and staff to consider mitigation measures to further reduce emissions.

After the announcement of the Agreement, a number of community and environmental organizations and the Governing Board of the South Coast Air Quality Management District expressed concerns, including the lack of public participation in its development. In response to these comments, at the July 21, 2005 public Board hearing, the Board approved Resolution 05-40 providing certain requirements that the Executive Officer must follow in order to enter into future memorandum of understandings (MOUs) and

similar agreements with air pollution sources for emission reductions. A copy of Resolution 05-40 is provided in Appendix B. Resolution 05-40 requires the Executive Officer to notify the Board and the public before starting to negotiate a MOU, to solicit comments or provide for public input during the development of a MOU and to bring the MOU, to the Board for ratification.

The Board also directed staff to conduct public consultation meetings on the Agreement to receive public comments. Staff held two meetings, one in Sacramento and one in Commerce, to solicit public comments. About 100 people attended the meeting in Sacramento. Over 250 people attended the meeting in Commerce.

At these meetings, 88 people testified on the Agreement, including 30 persons testifying as individuals or members of community groups, 28 elected officials, 7 representatives of local air districts, 18 environmental organizations, and 5 representatives of business groups, including the UP and BNSF railroads.

The results of these meetings and all public comments received were to be brought to the Board for its consideration on September 22, 2005. This meeting was subsequently rescheduled to October 27, 2005.

This staff report has been developed to explain the background, context, and provisions of the Agreement in support of the October 27, 2005, public meeting, and respond to comments received by staff.

II. NEED FOR EMISSIONS REDUCTIONS FROM RAIL YARDS

This chapter presents information showing that rail yards represent a significant statewide source of emissions, especially of diesel PM.

A. Emissions from Railroads for NOx and Particulate Matter

Railroad operations have statewide and regional impacts, as well as local impacts. Locomotives operating in California contribute about 6 percent of the statewide NOx and diesel PM emissions. As illustrated in Table II-1, while a significant proportion of these emissions occur in just four air basins in the State (Mojave, South Coast, San Joaquin, and Sacramento), nearly all air basins in the State are impacted by some level of locomotive NOx and PM emissions.

Table II-1
2003 Statewide Locomotive - Emission Inventory by Air Basin
(tons per day)

AIR BASIN	NOx	PM*
Mojave Desert	46.8	1.3
South Coast	37.8	0.9
San Joaquin Valley	29.5	0.8
Sacramento Valley	25.2	0.6
Bay Area	14.4	0.4
South Central Coast	9.1	0.4
Rest of the State	29.2	0.6
Total	192	5

* Directly emitted particulate matter.

In addition, the results of the recent ARB Roseville Rail Yard Study (described below) demonstrate that rail yards can be a significant local source of diesel PM emissions.

B. Roseville Rail Yard Study

At the request of the Placer County Air Pollution Control District, staff undertook a study of the potential public health risks from diesel PM emissions due to locomotive activities at UP's J.R. Davis Rail Yard (Roseville rail yard) in Roseville, Placer County. Roseville is a rapidly growing area and development over the past several years has put more residences in close proximity to the rail yard. The Roseville rail yard is situated near the heart of downtown Roseville, encompassing about 950 acres on a one-quarter mile wide by four-mile long strip of land that parallels Interstate 80. The Roseville rail yard is bounded by commercial, industrial, and residential properties. The Roseville rail yard is the largest service and maintenance rail yard in the West with over 30,000 locomotives visiting annually. ARB completed a health risk assessment of airborne PM emissions from diesel-fueled locomotives at the Roseville rail yard on October 14, 2004.

Key findings of the study were:

- Diesel PM emissions in 2000 from locomotive operations were estimated to be 25 tons per year;
- Of the total diesel PM emissions in the yard, moving locomotives were estimated to account for about 50 percent, idling locomotives accounted for about 45 percent, and locomotive testing accounted for about 5 percent of the total diesel PM emissions in the yard; and
- Computer modeling predicted potential cancer risks greater than 500 in a million (based on 70 years exposure) over a 10 to 40 acre area northwest of the service track areas and the hump and trim area. Risk levels between 100 and 500 in a million were predicted to occur over about 700 to 1,600 acres in which about 14,000 to 26,000 people live and between 10 and 100 in a million were predicted to occur over a 46,000 to 56,000 acre area in which about 140,000 to 155,000 people live.

Given the magnitude of diesel PM emissions and the large area impacted by these emissions, it was clear that mitigation measures were needed to significantly reduce diesel PM emissions at the Roseville rail yard. Efforts have already begun to develop and implement a number of mitigation measures. The ARB worked closely with UP and the Placer County Air Pollution Control District to complete the Roseville Railyard study and to develop both short-term and long-term voluntary mitigation measures for the yard.

C. Identification of Diesel PM as a Toxic Air Contaminant and Development of the Diesel Risk Reduction Plan

In August 1998, the Board identified diesel PM as a toxic air contaminant (TAC). Following the identification process, the ARB was required by law to determine if there is a need for further control, which then moved into the risk management phase of the program.

In 2000, staff recommended a comprehensive plan, the Diesel Risk Reduction Plan (DRRP), to further reduce diesel PM emissions and the health risks associated with such emissions. This plan seeks to reduce Californians' exposure to diesel PM and associated cancer risks from baseline levels in 2000 by 85 percent by 2020. In October 2000, the Board approved the DRRP.

The DRRP identified air toxic control measures and regulations that will set more stringent emissions standards for new diesel-fueled engines and vehicles, establish retrofit requirements for existing engines and vehicles where determined to be technically feasible and cost-effective, and require the sulfur content of diesel fuel to be reduced to no more than 15 ppm. The Agreement is an important component towards meeting the diesel risk reduction goals set out in the DRRP.

III. STATEWIDE STRATEGIES TO REDUCE THE EMISSION IMPACTS FROM RAIL YARDS

Similar to other statewide sources within the State, ARB has developed a comprehensive strategy to address the emission impacts from locomotives and rail yards. The Agreement is an important component in this overall statewide strategy.

A. General Approach

The Agreement is one component of ARB's strategy to address and mitigate the emission impacts from locomotives and rail yards. In addition to the Agreement, this overall strategy includes:

- Accelerating locomotive turnover by 2010;
- Expediting statewide measures to reduce emissions near rail yards;
- Performing yard-by-yard risk assessment and mitigation;
- Adopting national "Tier 3" locomotive standards and accelerating introduction of Tier 3 locomotives in California;
- Implementing ARB rules to limit emissions from intermodal equipment at rail yards; and
- Other measures identified in the Business, Transportation, and Housing Agency and California Environmental Protection Agency Goods Movement Action Plan.

Specific actions to implement these strategies are described below.

B. 1998 South Coast Locomotive Emissions Agreement

In 1998, ARB, the Class I freight railroads operating in the South Coast Air Basin (BNSF and UP), and the U.S. EPA signed the 1998 MOU, agreeing to a locomotive fleet average emissions program in the SCAQMD. The 1998 MOU requires that, by 2010, the Class I freight railroads fleet of locomotives in the SCAQMD achieve average emissions equivalent to the NOx emission standard established by the U.S. EPA for Tier 2 locomotives (5.5 grams per brake horsepower-hour). The MOU applies to both line haul (freight) and switch locomotives operated by the Railroads. This emission level is equivalent, on average district-wide, to operating only federal Tier 2 NOx compliant locomotives in the SCAQMD.

The combination of more stringent federal locomotive standards and the early introduction of newer, cleaner Tier 2 locomotives into the SCAQMD as a result of the 1998 MOU will provide about a 20 to 25 ton per day, or about a 67 percent, reduction in NOx emissions in 2010. Under just the federal program, this level of control would not be anticipated until after 2030. In addition, while not specifically targeted in the 1998 MOU, staff estimates that significant reductions in diesel PM will also be achieved.

Staff also estimates that, because of the statewide scope of railroad operations, a significant number of these newer, cleaner Tier 2 locomotives, introduced as a result of the 1998 MOU, will see operation in other parts of the State. Staff estimates that the operation of these locomotives in other parts of the State could reduce locomotive NOx emissions by up to 15 to 20 tons per day. This is significantly beyond what would be anticipated without the 1998 MOU.

C. Clean Diesel Fuel Requirements for Intrastate Locomotives

Since 1993, California has had regulations in place that require the use of CARB diesel fuel in on- and off-road vehicles (stationary sources were added to these requirements in 2003). The CARB diesel fuel regulations set specifications for both fuel sulfur and aromatic hydrocarbon levels. Because of the aromatic hydrocarbon specifications, CARB diesel fuel is significantly cleaner than that required by the federal government, providing NOx and PM benefits beyond the federal program. However, the CARB diesel fuel regulations have not historically applied to locomotives.

In November 2004, the Board approved a regulation requiring the use of CARB diesel fuel in intrastate locomotives statewide beginning in 2007.

D. Federal Tier 3 Locomotive Emission Standards

U.S. EPA is developing new locomotive emission standards, commonly referred to as "Tier 3", modeled after the 2007/2010 highway and Tier 4 non-road diesel engine programs. U.S. EPA has placed an emphasis on achieving emission reductions through the use of advanced exhaust emission control technology starting as early as 2011. These standards would apply to new locomotives manufactured in 2011 and beyond. This technology, based on high-efficiency catalytic aftertreatment, will be enabled by the availability of clean, ultra-low sulfur (15 ppm) diesel fuel in the national locomotive fleet beginning in 2012. The application of exhaust emission control technologies in new locomotives could reduce both NOx and PM locomotive exhaust engine emissions by as much as 90 percent. U.S. EPA plans to publish the proposed Tier 3 locomotive emission standards in mid-2006 and issue a final rulemaking in mid-2007.

Staff is working closely with U.S. EPA staff on the development of these new locomotive emission standards. Staff has commented that any new national locomotive emission reduction program must address both new locomotives through aftertreatment based standards, and existing in-use locomotives through aggressive rebuild and remanufacture requirements, as well as requirements for reductions in locomotive idling emissions through the installation of anti-idling devices on the national locomotive fleet. Because of federal preemptions, the establishment of aggressive national locomotive emission standards is essential for California to achieve the emission reductions it needs from the locomotive fleet.

E. Goods Movement Action Plan

In June 2004, the Schwarzenegger Administration began a concerted effort to assemble goods movement stakeholders to learn about the problems, opportunities, and challenges facing goods movement in the future in California. One of the results of these meetings was the formation of the Cabinet-Level Goods Movement Working Group in December 2004, co-chaired by Secretary Sunne Wright McPeak of the Business, Transportation and Housing Agency and Secretary Alan Lloyd of the California Environmental Protection Agency. Their efforts led to the formation of the Administration's Goods Movement Policy, "Goods Movement in California," released in January 2005.

The Goods Movement Action Plan is a two-phase process. Phase I of the report has recently been completed. The full report is available on the ARB web site.

The Phase II Action Plan (to be completed by December 2005) will develop a statewide implementation plan for goods movement capacity expansion, goods movement-related environmental and community mitigation, and goods movement-related homeland security and public safety enhancement. It will integrate efforts to mitigate environmental impacts, achieve congestion relief, and enable efficiency improvements as quickly as possible, including developing business plans which will detail the timing, sequencing, and funding of corridor expansion projects.

As part of the Phase I Action Plan, staff identified a number of strategies to reduce, among other sources, locomotive emissions in and around the ports and intermodal rail facilities. The strategies include:

- Adoption of highly effective Tier 3 engine standards by U.S. EPA;
- Accelerate use of locomotives that employ Tier 3 or equivalent technologies;
- Application of diesel PM retrofit controls and other measures to reduce emissions from switching operations; and
- Accelerate efforts to reduce locomotive idling emissions.

F. Proposed ARB Cargo Handling Regulation

Cargo-handling equipment is a significant emission category contributing to regional and community air pollution impacts. Cargo handling equipment is used to transfer goods and containers at intermodal facilities, and includes equipment such as yard tractors (hostlers), cranes, top handlers, side handlers, forklifts, loaders, and cranes. As a result, staff has proposed a regulation to reduce emissions from off-road mobile cargo handling equipment at ports and intermodal rail yards.

This draft proposed regulation will reduce both diesel PM and criteria pollutant emissions from mobile compression ignition cargo handling equipment that operate at ports and intermodal rail yards throughout the state. The proposed regulation would apply to any mobile compression-ignition equipment that operates at a port or

intermodal rail yard in California. Under the proposal, new equipment will be required to meet 2007 engine standards and existing cargo handling equipment will be required to phase in newer and cleaner engines over different periods of time.

The Board's scheduled to consider the proposed regulation in December 2005. Staff has also begun preliminary work on another regulation to reduce both diesel PM and criteria pollutant emissions from other compression ignition off-road equipment throughout the State, some of which is used at non-intermodal rail yards. The Board is scheduled to consider this proposed regulation in 2006.

G. Carl Moyer Program

The Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program) provides incentive funds for the incremental cost of cleaner engines and equipment beyond what is required by regulation or agreement. Eligible projects include cleaner on-road, off-road, marine, and locomotive engines, as well as forklifts, airport ground support equipment, and auxiliary power units. The program achieves near-term reductions in emissions of NOx, PM, and reactive organic gas which are necessary for California to meet its clean air commitments under the State Implementation Plan.

Incentive programs, like the Carl Moyer Program, encourage owners and operators of equipment associated with goods movement to voluntarily reduce their emissions by subsidizing the increased cost of cleaner new engines or retrofitted control equipment. Carl Moyer Program funds can be leveraged with other funding sources designed to subsidize emission control programs, such as those administered by the U.S. EPA's West Coast Diesel Emission Reductions Collaborative and the Ports of Los Angeles and Long Beach. Recent actions by the California Legislature have increased the funding available through the Carl Moyer Program, and staff expects U.S. EPA will similarly increase the national incentive funding available to reduce diesel emissions from port-related sources under national and international control.

IV. EXISTING REGULATORY AUTHORITY

This chapter describes existing State authority and its limitations. Also, this chapter discusses how local and State ability to control emissions from locomotives is significantly preempted by federal law.

A. ARB authority to enter into an Agreement

Staff entered into the Agreement after fully reviewing the scope of the ARB's and local air districts' authority under California and federal law, the possibilities of legal challenges from the railroads, and the need for short- and mid-term emission reductions. After fully considering these and other factors, staff determined that the Agreement was the best course of action. Staff has entered into other agreements and MOUs in the past when it has determined that voluntary agreements will be in the best interest of the State's health and welfare; specifically, at times when its authority to regulate is in question, the regulations would face certain challenge in the courts, and the voluntary agreement would result in certain verifiable emission benefits.[1]

Staff's authority to enter into an agreement (also referred to as an MOU) is provided in the Health and Safety Code. Sections 39515 and 39516 provide in pertinent part:

> §39515(b). The intention of the Legislature is hereby declared to be that the executive officer [of ARB] shall perform and discharge, at the direction and control of the state board, the powers, duties, purposes, functions, and jurisdictions vested in the state board and delegated to the executive officer by the state board.
>
> §39516. Any power, duty, purpose, function, or jurisdiction which the state board may lawfully delegate shall be conclusively presumed to have been delegated to the executive officer unless it is shown that the state board, by affirmative vote recorded in the minutes of the state board, specifically has reserved the same for the state board's own action.

At the time ARB entered into the Agreement, staff was authorized to negotiate and execute the final agreement.[2] The Board having not expressly reserved such authority unto itself, the authority to enter into MOUs was conclusively presumed as having been

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[1] For example, the Memorandum of Mutual Understanding and Agreements South Coast Locomotive Fleet Average Emissions Program, July 2, 1998; South Coast Ground Support Equipment Memorandum of Understanding, November 27, 2002.

[2] On July 21, 2005, by Resolution No. 05-40, the Board expressly reserved unto itself the power to ratify any future MOU with air pollution sources for emission reductions, or to amend any MOU, prior to the MOU or amendment becoming effective. However, the Board expressly authorized the Executive Officer to negotiate on and enter into MOUs in the future with air pollution sources for emission reductions, and any future amendments, subject to the condition that they shall not become effective until they are presented to and ratified by Board.

delegated to the Executive Officer and her staff. Pursuant to ARB's general grant of authority under Health and Safety Code section 39600, the Legislature vested the Board and – by presumptive delegation – the Executive Officer with authority to "do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon [them]." The Legislature specifically directed the ARB to achieve the maximum degree of emission reductions by the earliest practicable date from off-road equipment and vehicles, including locomotives, and that the burden of achieving reductions should be shared by all mobile sources. (Health and Safety Code sections 43000.5, 43013(b), and 43018(a).)[3]

B. Federal Preemption

Despite the authority granted to ARB by the Legislature, the breadth of that authority has been significantly limited by federal preemption. In the 1990 federal Clean Air Act (CAA), Congress enacted an express preemption prohibiting all states and political subdivisions from adopting or attempting to "enforce any standard or other requirement relating to the control of emissions…from new locomotives or new engines used in locomotives." (CAA section 209(e)(1)(B).) Under its final rule for locomotives and locomotive engines the U.S. EPA interpreted the preemption broadly. (*Emission Standards for Locomotives and Locomotive Engines*, 63 F.R. 18978, 18993-4 (April 16, 1998); 40 CFR Section 85.1603.)

In contrast to all other federal rules for on-road motor vehicles and non-road vehicles and equipment, "new" has been defined to include not only factory-new locomotives, but also remanufactured locomotives and locomotive engines. (*Id.* at 18979-18980.) Additionally, for purposes of preemption, the useful life period for locomotives and engines has been defined to be 133 percent of the locomotives and engines' useful life. (*Id.*, at 18984, 18993-4; 40 CFR Section 85.1603.) The net effect is that virtually all locomotives are considered "new" for purposes of preemption, regardless of their age. Although it can be argued that states and local jurisdictions retain authority to impose operational controls on railroads pursuant to *EMA v. U.S. EPA* (D.C. Cir. 1996) 88 F.3d 1075, at 1093-1094, it is noted that the *EMA* decision was reviewing U.S. EPA's final rule for non-road engines,[4] a rule that expressly excludes locomotives.

It is further noted that in the final locomotive rule,[5] U.S. EPA did not discuss or find that states or local jurisdictions retained authority to implement in-use operational controls for locomotives or that section 209(d) carves out an exception to the locomotive

[3] The Legislature arguably provides concurrent authority to the local districts to regulate locomotives. (Health and Safety Code section 40000 ["primary responsibility for control of air pollution from all sources, other than emissions from motor vehicles."] The authority, however, is limited compared to that provided to ARB. The districts are specifically constrained from adopting any order, rule, or regulation that specifies "the design of equipment, type of construction, or particular method to be used in reducing the release of air contaminants from railroad locomotives." (Health and Safety Code section 40702.)

[4] *Final Rule, Air Pollution Control; Preemption of State Regulation for Nonroad Engine and Vehicle Standards* 59 Fed.Reg. 36969 (July 20, 1994).

[5] *Emissions Standards for Locomotives and Locomotive Engines*, 63 Fed.Reg. 18978 (April 16,1978).

preemption. The Court in its decision in *EMA* deferred to the expertise of U.S. EPA in finding that section 209(d) applied. (*EMA*, 88 F.3d at 1094.) It is uncertain that such deference would occur given U.S. EPA's silence on the final locomotive rule.

ARB's authority to adopt regulations for locomotives is potentially further constrained by other federal acts, including the Interstate Commerce Commission Termination Act of 1995 (ICCTA) (49 U.S.C.A. section 10501, et seq.). Congress enacted the ICCTA, which effectively deregulated the rail and motor carrier industries, to ensure the economic viability of the two industries.[6] As generally interpreted by the courts and the Surface Transportation Board (STB), the administrative agency entrusted by Congress to implement and interpret the Act in the first instance, the ICCTA has a broad preemption limiting states, and even conflicting federal programs, from adopting rules that affect national railroad transportation. Section 10501 sets forth the jurisdiction of the STB over rail carriers that are part of an interstate rail network. Its jurisdiction over the following is exclusive:

> (1) transportation by rail carriers, and the remedies provided in this part with respect to . . .rules (including car service, interchange, and other operating rules), practices, routes, services and facilities of such carriers; and
>
> (2) the construction, acquisition operation, abandonment, or discontinuance of . . . switching, or side tracks, or facilities, even if the tracks are located, or intended to be located, entirely in one State, is exclusive. Except as otherwise provided in this part, the remedies provided under this part with respect to regulation of rail transportation are exclusive and preempt the remedies provided under Federal or State law.

The term "transportation" is also broadly defined and specifically includes locomotives and rail yard facilities. (49 U.S.C.A. section 10502(9).) The Ninth Circuit Court of Appeals, among other courts, has broadly interpreted the program to preempt any regulation that has an integral economic effect on a railroad's interstate rail operations. In *City of Auburn v. U.S.*, the Ninth Circuit considered the question of whether the STB jurisdiction and whether the ICCTA preempted a county's authority to require an environmental review and permit prior to Burlington Northern's initiation of a project to repair and resume operations of an interstate rail line. The court answered in the affirmative, stating:

> [G]iven the broad language of §10501(b)(2), (granting the STB exclusive jurisdiction over construction, acquisition, operation, abandonment, or discontinuance of rail lines) the distinction between "economic" and "environmental" regulation begins to blur. For if local authorities have the ability to impose "environmental" permitting regulations on the railroad,

[6] *Who's driving the Train? Railroad Regulation and Local Control*, Maureen E. Eldredge, 75 U. Colo. L. Rev. 549, 550, Spring 2004.

> such power will in fact amount to "economic regulation" if the carrier is prevented from constructing, acquiring, operating, abandoning, or discontinuing a line.
>
> We believe the congressional intent to preempt this kind of state and local regulation of rail lines is explicit in the plain language of the ICCTA and the statutory framework surrounding it. [Emphasis added.] Because congressional intent is clear, and the preemption of rail activity is a valid exercise of congressional power under the Commerce Clause, we affirm the STB's finding of federal preemption. (*City of Auburn v. U.S.* (Ninth Cir. 1998) 154 F.3d 1025, 1031.)

The Fifth Circuit has similarly found a broad preemption under the ICCTA as it applies to a state law directly regulating railroad operations rather than requiring an environmental review and permit. The Court found that a Texas statute prohibiting railroads from blocking of roadways was expressly preempted, stating:

> The language of the statute could not be more precise, and it is beyond peradventure that regulation of KCS train operations, as well as the construction and operation of the KCS side tracks, is under the exclusive jurisdiction of the STB unless some other provision in the ICCTA provides otherwise. The regulation of railroad operations has long been a traditionally federal endeavor, to better establish uniformity in such operations and expediency in commerce, and it appears manifest that Congress intended the ICCTA to further that exclusively federal effort, at least in the economic realm. (*Friberg v. Kansas City Southern Railway*, (5th Cir. 2001) 267 Fed.3d 639, 643.)

The Court further stated:

> Regulating the time a train can occupy a rail crossing impacts . . . the way a railroad operates its trains, with concomitant economic ramifications that are not obviated or lessened merely because the provision carries a criminal penalty. (*Id.*)

Other courts have found state or local actions having the effect of regulating train operations to be similarly preempted by the ICCTA (*Rushing v. Kansas City Southern Railway Co.* (S.D. Miss. 2001), 194 F.Supp. 2d 493 (Homeowners' nuisance and negligence claims based on excessive noise and vibrations from trains operated in nearby switch yard are preempted by ICCTA); *City of Seattle v. Burlington Northern Railroad Co.* (2002) 145 Wash.2d 661 (Seattle ordinances prohibiting railroad switching activities from interfering with the use of any street or alley, or impeding property access, for a period of time longer than four consecutive minutes, and prohibiting switching on arterial streets during peak hours, were preempted by the ICCTA).)

Moreover, decisions of the STB have consistently found that the ICCTA preempts the type of state or local regulation of railroad operations addressed in these court decisions. In a March 2005 decision finding a District of Columbia statute preempted by the ICCTA, the STB stated:

> As the courts have observed, "[i]t is difficult to imagine a broader statement of Congress' intent to preempt state regulatory authority over railroad operations" than that contained in section 10501(b) [of the ICCTA]. *CSX Transp., Inc. v. Georgia Pub. Serv. Comm'n*, 944 F.Supp. 1573, 1581-84 (N.D. Ga. 1996) (Georgia PSC). Every court that has examined the statutory language has concluded that the preemptive effect of section 10501(b) is broad and sweeping, and that it blocks actions by states or localities that would impinge on the Board's jurisdiction or a railroad's ability to conduct its rail operations."

(*CSX Transportation, Inc. – Petition For Declaratory Order (CSX II)* 2005 WL 584026, *6 (S.T.B. March 14, 2005).) The STB cited nine cases for this proposition, the first of which was the Fifth Circuit *Friberg* decision holding that the Texas anti-blocking statute was preempted by the ICCTA.

Parties asserting that ARB or local air districts could impose the key elements in the Agreement as regulations rely on the recent opinion in *Green Mountain Railroad v. Vermont* (2nd. Cir. 2005), 404 F.3d 638. After holding that Vermont was preempted by the ICCTA from requiring an environmental preconstruction permit for a railroad's new transloading facility, the Court observed that "Electrical, plumbing and fire codes, direct environmental regulations enacted for the protection of the public health and safety, and other generally applicable, non-discriminatory regulations and permit requirements would seem to withstand preemption." (*Id*. at 643.). The Court further noted that although police power of local jurisdictions may exist, they "must not have the effect of foreclosing or restricting the railroad's ability to conduct its operations or otherwise unreasonably burdening interstate commerce." (*Green Mountain*, 404 F.3d. at 643, citing *Village of Ridgefield Park v. New York Susquehanna & W. Railway*, (2000) N.J. 446, 750 A.2d 57, 64.) Again, the Court in *Green Mountain* did not have to draw this line between preemption and state police powers, having found Vermont's statute was preempted. Moreover, the Court's observations do not appear consistent with the *Friberg* case or the STB's recent decisions.

Faced with this strong potential of preemption and the likelihood that the railroads would contest ARB's regulatory authority over at least some aspects of its plans to attain immediate emission reductions from the railroads – e.g. adopting idling control measures and requiring that all locomotives that operate in California use CARB low sulfur diesel fuel – ARB, in its discretion, decided that the best course would be to determine if the railroads would voluntarily agree to implement variations of such measures through an MOU. By entering into negotiations with the railroads, ARB avoided unnecessary litigation and was able to obtain commitments for immediate emission control actions that benefit the entire State, while protecting the existing rights

of ARB, local air districts, and local jurisdictions to continue with their existing emission control programs.

Staff is preparing a companion document to this report, titled “ARB/Railroad Statewide Agreement: Public Comments and Agency Responses”, which sets forth legal comments received from interested stakeholders and staff’s responses thereto. The responses explain ARB’s legal analysis in much greater detail and summarize applicable cases as they apply to federal preemption and other federal constraints on state and local actions on railroads, locomotives, and railway operations in general.

V. APPLICABILITY OF THE AGREEMENT

This chapter discusses that the Agreement covers the California operations of both UP and BNSF. No other railroads are included in the Agreement.

A. Locomotives covered by the Agreement

With the exception of the requirement to install anti-idling devices (which only applies to locomotives captive to California), the Agreement applies to all UP and BNSF locomotives that operate in California. This includes intrastate locomotives[7] that are captive within the State, such as short haul and switch locomotives, and line haul locomotives, which move on a regular basis between California and other states. In particular, the limitations on idling and the requirements for the identification and repair of smoking locomotives apply wherever these locomotives are operating, including operation both inside and outside of rail yards (such as along railroad sidings, along spur lines, and on main lines).

Staff estimates that UP and BNSF combined operate at least 1,000 of their fleet of 13,000 locomotives daily within California. This represents about 450 intrastate locomotives and at least 550 line haul interstate locomotives that constantly move in and out of the State. These are the locomotives that are covered by the Agreement.

B. Rail Yards Covered by the Agreement

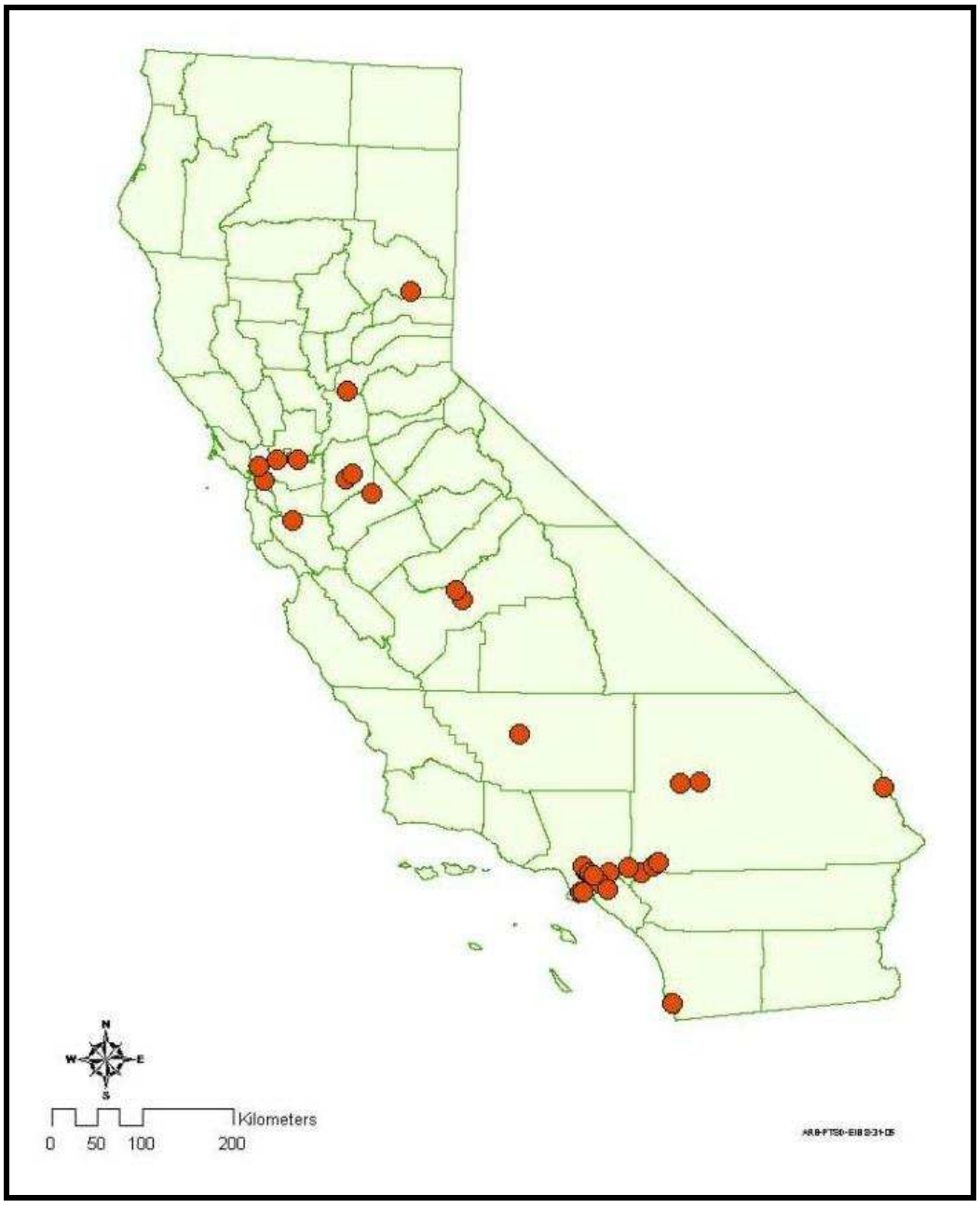
Rail yards in California typically perform one or more of the following functions:

- Locomotive fueling;
- Mechanical repair;
- Rail car classification;
- Intermodal services; and
- Automobile receiving and distribution.

[7] Intrastate locomotives are defined as those diesel-electric locomotives that operate 90 percent or more of the time within the boundaries of the state of California which can be measured by fuel consumption, hours of operation, or annual rail miles traveled.

The Agreement categorizes the California rail yards covered by the Agreement into two types: "Designated Rail Yards" and "Covered Rail Yards". A map of the rail yards covered by the Agreement is provided in Figure V-1.

Figure V-1:
Rail Yards Covered by the Agreement



1. Designated Rail Yards

The Designated Rail Yards included in the Agreement are the larger rail yards in the State, and were selected based upon the following information:

- Fuel distribution;
- Train activity and locomotive activity;
- Proximity to residents;
- Population density of residences;
- Number of intermodal lifts; and
- Potential environmental justice impacts.

The seventeen rail yards identified as Designated Rail Yards are shown below in Table V-1.

Table V-1: Designated Rail Yards

RAILYARD	COMPANY	STREET ADDRESS	CITY/ZIP CODE
Roseville	UP	9391 Atkinson Street	Roseville
Commerce	UP	4341 East Washington Blvd.	Commerce
Hobart	BNSF	3770 East Washington Blvd.	Los Angeles
Commerce/Eastern	BNSF	2818 Eastern Avenue	Commerce
Watson/Wilmington	BNSF	1302 East Lomita Boulevard	Wilmington
LATC	UP	750 Lamar Street	Los Angeles
Mira Loma	UP	4500 Etiwanda Avenue	Mira Loma
Richmond	BNSF	303 Garrad Avenue	Richmond
Stockton	UP	833 East 8th Street	Stockton
Stockton	BNSF	720 South "B" Street	Stockton
Barstow	BNSF	200 North Avenue "H"	Barstow
City of Industry	UP	17525 East Arenth Avenue	City of Industry
Colton	UP	19100 Slover Avenue	Bloomington
ICTF/Dolores	UP	2401 East Sepulveda Blvd.	Long Beach
Oakland	UP	1400 Middle Harbor Road	Oakland
San Bernardino	BNSF	1535 West 4th Street, San	Bernardino
San Diego	BNSF	1342 Cesar Chavez Parkway	San Diego

As is described in the next Chapter, UP and BSNF are required to identify Program Coordinators, implement both the idling and visible emission reduction program elements, collect data for ARB to perform health risk assessments, and identify feasible risk mitigation measures for the Designated Rail Yards.

2. Covered Rail Yards

Covered Rail Yards are generally smaller rail yards relative to the Designated Rail Yards. The Agreement applies to 15 Covered Rail Yards. The selection criteria for the Covered Rail Yards are similar to those used for selection of the Designated Rail Yards. A list of the Covered Rail Yards is provided in Table V-2.

Table V-2: Covered Rail Yards

RAILYARD	COMPANY	STREET ADDRESS	CITY/ZIP CODE
Anaheim	UP	200 South Adams Street	Anaheim
Fresno	UP	3369 North Weber Street	Fresno
Martinez	UP	274 Embarcadero Street	Martinez
Milpitas	UP	224 Curtis Avenue	Milpitas
Montclair	UP	10773 Central Place	Montclair
Portola	UP	1 Park Avenue	Portola
Yermo	UP	1 Union Pacific Boulevard	Yermo
Fresno (Calwa)	BNSF	3901 East Vine Street	Fresno
Bakersfield	BNSF	1501 “F” Street	Bakersfield
Pico Rivera	BNSF	7427 Rosemead Blvd.	Pico Rivera
La Mirada	BNSF	14503 Macaw Street	La Mirada
Needles	BNSF	834 Front Street	Needles
Pittsburg	BNSF	1 West Santa Fe	Pittsburg
Riverbank	BNSF	3243 Talbot Avenue	Riverbank
Watson	BNSF	1302 East Lomita Boulevard	Wilmington

As is described in the next chapter, UP and BSNF are required to identify program coordinators and implement both the idling and visible emission reduction program elements at the Covered Rail Yards. However, health risk assessments are not required for the Covered Rail Yards.

VI. PROGRAM ELEMENTS OF THE AGREEMENT

This chapter summarizes many program elements in the Agreement intended to reduce the emission impacts of rail yard operations on local communities.

A. Locomotive Idling-Reduction Program

The goal of this program element is to effectively eliminate non-essential locomotive idling, both around rail yards and statewide, through the installation of idling reduction devices installed on intrastate locomotives and through limitations of non-essential idling on all other locomotives.

1. Installation of Idling Reduction Devices

Both UP and BNSF have begun national programs to retrofit portions of their locomotive fleet with idling reduction devices. While some of the locomotives retrofitted nationally are in operation in California, only about half of the UP and less than 5 percent of the BNSF California intrastate locomotive fleet has already been retrofitted under the railroads' national efforts. In order to expedite the completion of this program in California, the Agreement requires UP and BNSF to install idling reduction devices on the remaining intrastate locomotives not yet retrofitted by June 30, 2008, according to the schedule identified in Table VI-1.

Table VI-1:
Cumulative Percent of Intrastate Locomotives to be Equipped with Idle Reduction Devices

Date	Cumulative Percent of Unequipped Intrastate Locomotives To Be Equipped
June 30, 2006	35%
June 30, 2007	70%
June 30, 2008	>99%

In order to ensure that the railroads are meeting their installation obligations, the Agreement requires that the railroads submit annual inventories of the intrastate locomotive fleet, including information on the number of locomotives that have been retrofitted with idling reduction devices.

The Agreement also requires both UP and BNSF to annually inform ARB of their progress towards equipping their entire national locomotive fleet (about 13,000 locomotives) with idling reduction devices. While the Agreement does not require the installation of idling reduction devices on interstate locomotives, UP and BNSF combined have recently purchased more than 600 new locomotives for their national fleets which meet the more stringent Tier 2 emission standards and have idling

reduction devices installed. Staff anticipates that many of these locomotives will be operating in the South Coast Air Basin by 2010 to comply with the 1998 MOU, with benefits for much of the rest of the State as these locomotives move in, around, and out of California.

2. Idling Restrictions

Under the Agreement, locomotives (including both intrastate and interstate locomotives) installed with idling reduction devices must limit non-essential idling to no more than 15 consecutive minutes. Essential idling is defined as idling necessary to:

- Ensure adequate air brake pressure for locomotive and railcars;
- Ensure other safety related purposes;
- Prevent freezing of engine coolant;
- Ensure compliance with federal guidelines for occupied locomotive cab temperatures; and
- Engage in necessary maintenance activities.

For all other locomotives (including both intrastate and interstate locomotives) not equipped with idling reduction devices, non-essential idling is limited to no more than 60 consecutive minutes. Under the Agreement, the railroads shall make efforts to notify their train crews if the anticipated wait time for such events as train meets, track repair, emergency activities, and other events could be greater than 60 consecutive minutes so that train crews can shut down their locomotive(s).

3. Idling Reduction Training Program

The development of a training program by the railroads is essential to ensure the effective implementation of the idling reduction program. The railroads will provide the necessary training for locomotive operators, managers, supervisors, local rail yard and regional dispatchers, and any other appropriate railroad employees. The railroad's training programs will ensure that the appropriate railroad employees are able to effectively implement the idling reduction program. Among other elements, the railroads' training programs must include instruction on how to shut down locomotives without idling reduction devices if it is apparent the idling will exceed 60 consecutive minutes. Each railroad is responsible for maintaining records of training, and must provide information annually to the ARB on the establishment, implementation (including training schedules), and compliance with the idling reduction training program.

4. Idling Reduction Program Coordinators

Both railroads are required to identify idling reduction Program Coordinators for each of the Designated and Covered Rail Yards. The Program Coordinators are responsible for implementation of the idling reduction standards and for maintaining and providing records to demonstrate compliance with this program element. The Program Coordinators also provide a local contact for any potential issues regarding instances of non-compliance with the provisions of the locomotive idling reduction program.

B. Early Introduction of Lower Sulfur Diesel Fuel in Locomotives

The goal of this program element is to achieve emission benefits from the use of cleaner, lower sulfur on-highway diesel fuel in a high percentage of interstate locomotives fueled in California. Under the Agreement, the railroads have agreed that at least 80 percent of their combined intrastate and interstate locomotive fleets shall either CARB diesel or low sulfur federal on-highway diesel fuel by January 1, 2007, nearly six years earlier than is required under federal regulations.

1. Current Regulatory Requirements

Under federal law, railroads are currently permitted to use in locomotives federal nonroad diesel fuel with a sulfur limit of 5,000 ppm. In many parts of the country, the average sulfur content of this diesel fuel is well over 3,000 ppm. This limit drops to 500 ppm sulfur in 2007. In June 2006, the sulfur limit for on-road (vehicular) diesel fuel will drop to 15 ppm nationally. However locomotive diesel fuel is not required to meet a 15 ppm sulfur limit until 2012. These standards are shown in Table VI-2 below.

Table VI-2:
U.S. EPA Diesel Fuel Standards

Applicability	Implementation Date	Maximum Sulfur Level (ppmw)
All Nonroad	1993	5000
All On-road	2006	15
All Nonroad	2007	500
All Nonroad (except locomotive and marine)	2010	15
Locomotive and Marine Nonroad	2012	15

In November 2004, ARB approved regulations that require intrastate locomotives to use California diesel fuel (meeting a 15 ppm sulfur limit and 10 percent aromatic limit) beginning January 1, 2007. Intrastate locomotives consume about 15 percent of the total locomotive diesel fuel dispensed in California. This regulation did not include requirements for interstate locomotives, which have the option of increasing their

reliance on out-of-state fuel, which is generally of poorer quality than available in California.

2. Early use of Low Sulfur Diesel Fuel

Currently in California, almost all of the locomotive diesel fuel supplied by both railroads from their California rail yards has a sulfur content ranging between 140 and 350 ppm, which are the levels seen in on-road (vehicular) diesel fuel. Very little diesel fuel supplied from California rail yards has a sulfur content above these levels. This is due to both the limited production of higher sulfur locomotive diesel fuel (similar to that used in other parts of the country) in California, and the limits placed on diesel fuel by the principal California petroleum products pipeline system operator, which limits the sulfur level of all diesel fuel (including locomotive diesel fuel) shipped to no more than 500 ppm. Beginning in June 2006, the principal California pipeline system operator will limit the sulfur content of diesel fuel shipped in its system to 15 ppm.

Under the Agreement, UP and BNSF have agreed to maximize their use of 15 ppm diesel fuel by ensuring that by January 1, 2007, a minimum of 80 percent of the diesel fuel supplied to all locomotives in California meets the on-road diesel fuel sulfur standards (15 ppm). This preserves the current practice of UP and BNSF to supply diesel fuel through their California rail yards which meets on-road diesel fuel sulfur standards, and ensures that their current fueling practices won't change through the importation of large quantities of higher sulfur federal non-road diesel fuel. Staff estimates that significantly more than 90 percent of the fuel dispensed by the two railroads beginning in 2007 will meet the 15 ppm on-road diesel fuel sulfur specifications.

By setting the minimum amount of 15 ppm diesel fuel use at 80 percent, the railroads will continue to be able to use their market leverage to seek more competitively priced diesel fuel in the marketplace. Often, this leverage allows the railroads to obtain on-road quality fuel at non-road diesel fuel prices. Requirements for a higher percentage of on-road diesel fuel use would have eliminated much of this leverage, and could have potentially resulted in the railroads changing their current fueling practices, resulting in potentially less on-road quality fuel used in California.

C. Visible Emission Reduction and Repair Program

The goal of this program element is to identify excessively smoking locomotives and to repair them as quickly as possible.

1. Fleet Average Performance Standard

This program element is designed to improve the visible emissions compliance rates, and ensure that the railroads continue to inspect and repair their locomotives in an expeditious manner to reduce visible emissions. Currently, the railroads estimate that their locomotive visible emissions compliance rate is nearly 98 percent. This program element will ensure that the visible emissions compliance rate for each of the railroads

is at least 99 percent of the railroads' intrastate and interstate locomotive fleets that operate in California.

2. Visible Emission Reduction Program Components

Under the Agreement, UP and BNSF must establish a visible emission reduction and repair program. The program must include the following key elements:

- Annual inspections of all locomotives that operate in California through the use of an opacity meter or a certified Visible Emissions Evaluator (VEE), and an additional number of locomotive inspections to ensure compliance with the performance standard;
- Identification of locomotives exceeding a steady state opacity measurement of 20 percent;
- Repair of locomotives that exceed the applicable federal locomotive visible emission certification standard within 96 hours;
- Ensure non-complying locomotives are not returned into service until they have demonstrated compliance with appropriate locomotive certification standards; and
- Annually provide a report on the total number of visible emissions inspections conducted by each railroad and the results of those inspections.

In addition, the railroads also must have employees who are certified visible emission evaluators at or near each of the Designated Rail Yards.

If the railroads fail to meet the 99 percent performance standard in any calendar year, the ARB and the railroads will meet to agree on additional measures that may be necessary to meet the locomotive fleet performance standard.

3. Visible Emission Reduction Training Program

The development of a training program by the railroads is essential to ensure the effective implementation of the visible emission reduction and repair program. The railroads will provide the necessary training at both the Designated and Covered Rail Yards for locomotive operators, managers, supervisors, local rail yard employees, and any other appropriate railroad employees. The railroad's training programs will ensure that the appropriate railroad employees are able to effectively implement the visible emission reduction and repair program. Among other elements, the railroads' training programs must include instruction on how to identify and report locomotives with excessive visible emissions. Each railroad is responsible for maintaining records of training, and must provide information annually to ARB on the establishment, implementation (including training schedules), and compliance with the visible emission reduction and repair program.

4. Visible Emission Reduction Program Coordinators

Both railroads are required to identify visible emission reduction and repair Program Coordinators for each of the Designated and Covered Rail Yards. The Program Coordinators are responsible for implementing the visible emission reduction and repair program components and for maintaining and providing records to demonstrate compliance with this program element. The Program Coordinators also provide a local contact for any potential issues regarding instances of locomotives with excessive visible emissions or non-compliance with the provisions of the visible emission reduction and repair program.

D. Health Risk Assessments

The goal of this program element is to expeditiously conduct new health risk assessments (HRAs) at 16 Designated Rail Yards (a HRA for the UP Roseville rail yard has already been completed). The HRAs will identify the associated risk from all on-site activities. The HRA will consider emissions of all toxic air contaminants from all emission sources at each Designated Rail Yard (including all resident and transient locomotives, on- and off-road equipment, and stationary equipment). In addition, ARB staff will provide additional information on the risk from nearby, off-site sources. In performing the HRAs, the railroads will collect and submit inventory, meteorological, demographic, and preliminary modeling data to ARB. ARB will develop guidelines for conducting the HRAs and will complete the HRAs based on the data developed for each Designated Rail Yard.

Presently, the SCAQMD is proposing a draft rule (Proposed Rule (PR) 3503 - Emission Inventory and Health Risk Assessment for Railyards) to require HRAs at rail yards operated by UP, BNSF, and other switching and terminal railroads in the SCAQMD within 15 months. This proposed rule is scheduled to be considered by the SCAQMD Governing Board on October 7, 2005. ARB has proposed to work with the SCAQMD on the coordinated implementation of both Rule 3503 and the Agreement to prioritize rail yard health risk assessments on a statewide basis. This approach would allow both agencies and the railroads to focus limited resources on this large scale effort in the most effective manner and to begin the mitigation of rail yard emissions from the larger railyards in the most expeditious manner.

1. Development of Health Risk Assessment Guidelines

ARB will develop the criteria and guidelines (Guidelines) for the identification, monitoring, modeling, and evaluation of toxic air contaminants from the Designated Rail Yards. To the extent possible, the Guidelines will be consistent with previous rail yard HRAs performed by ARB, as well as with HRA guidelines established by the Office of Environmental Health Hazard Assessment (OEHHA). ARB will consult with staff from OEHHA, local air districts, and the public in order to develop consistent, comprehensive

and accurate criteria and guidelines for use in evaluating toxic air contaminants from the Designated Rail Yards.

2. Collection of Data for Health Risk Assessments

By October 1, 2005, each railroad is required to submit a proposed study plan (Plan) which provides an outline and timeline of the necessary components and data to be submitted to ARB in order that a HRA may be completed for each Designated Rail Yard. The Plan shall include a description of how each railroad plans to collect or develop the following information:

- Rail yard specific activity data (i.e., hours of operation, number of trains each day, etc.);
- An emission inventory of any resident or transient major diesel equipment (including locomotives, on- and off-road vehicles, and non-road engines) operating in the rail yard;
- Dispersion modeling results (concentrations) of diesel emissions; and
- Appropriate meteorological and demographic data.

The Plans shall also include prioritization of the Designated Rail Yards to be evaluated.

The ARB will review and approve each plan before the railroads begin compiling, at their expense, the necessary data. The collection and compilation of data for eight of the Designated Rail Yards shall be completed within 18 months of approval of the Plan, and for the other eight Designated Rail Yards within 30 months of approval of the Plan. Table VI-3 identifies the schedule for collecting and compiling the data for the HRAs at the 16 Designated Rail Yards.

Table VI-3:
Schedule for Collecting and Compiling HRA Data

HRA to be performed within 18 months		HRA to be performed within 30 months	
Rail Yard	**Operator**	**Rail Yard**	**Operator**
Commerce	UP	Barstow	BNSF
Hobart	BNSF	ICTF/Dolores	UP
Commerce/Eastern	BNSF	LATC	UP
Colton	UP	Industry	UP
San Bernardino	BNSF	Watson	BNSF
Mira Loma	UP	Stockton	UP
Oakland	UP	Stockton	BNSF
Richmond	BNSF	San Diego	BNSF

3. Performing the Health Risk Assessments

Upon receiving all of the information from the railroads necessary for the HRAs, ARB shall complete the draft HRAs for each of the Designated Rail Yards. Upon completion of a draft HRA for a specific Designated Rail Yard, ARB and railroads will meet with the

local air district and community members to discuss the draft results. In addition, within 90 days after completion of each HRA, ARB and the railroads will meet and confer to:

- Finalize each HRA; taking into consideration all comments from the local air districts and community members; and
- Create a process to determine additional actions necessary to communicate and mitigate risks identified in the health risk assessment; and
- Put the identified risks in perspective, including identification of other sources (i.e., mobile and stationary sources near the rail yard) affecting the impacted community.

4. Identify and Implement Feasible Mitigation Measures

The goal of this program element is to identify and expedite the implementation of feasible measures to reduce the impact of air emissions from rail yards. The review specified under this program element has several steps that include:

- Performing an early review of the impacts of the air emissions at each of the Designated Rail Yards to identify feasible near-term actions that can be implemented to reduce risk;
- Once an HRA is completed for each Designated Rail Yard, identifying additional feasible measures that can be implemented to further reduce risk; and
- Annually reviewing and updating the implementation of risk mitigation measures at each Designated Rail Yard.

E. Early Review of the Impacts of Air Emissions

Under the Agreement, the railroads must review the air emissions (including emissions from locomotives, rail yard equipment, and on- and off-road vehicles) from each of the Designated Rail Yards by November 1, 2005. Based on the emissions assessments, the railroads will develop a plan to implement feasible changes that could lessen the impacts of these emissions on adjacent residential neighborhoods. As part of this plan, the railroads must meet with members of the community and local air districts regarding the concerns of the community and potential ways to address their concerns regarding the operations and emissions impacts of the Designated Yards.

1. Review of Impacts of Air Emissions after Completion of the Health Risk Assessment

Within 60 days of the finalization of each Designated Rail Yard HRA, ARB, the local air district, community member representatives, and the railroads will meet to discuss the findings of the health risk assessments and to discuss the concerns of the community. As part of this effort, the plan previously developed to lessen the impacts of these emissions in adjacent residential neighborhoods shall be updated to address the findings of the HRA. In this way, the information provided in the HRA can be

incorporated into the overall risk mitigation strategy at each Designated Rail Yard so that specific strategies to mitigate the risk drivers at each yard can be implemented.

2. Annual Updates

The railroads must update the plans for each Designated Rail Yard annually to:

- Ensure the risk mitigation measures implemented are effective;
- Allow for the incorporation and implementation of new feasible measures; and
- Account for changes in risk due to changes in rail yard activity.

The railroads, in cooperation with ARB, the local air district, and community member representatives, must hold annual meetings to update the public, and must provide annual progress reports on the risk mitigation efforts and strategies being implemented at the Designated Rail Yards.

F. Other Program Elements

1. Remote Sensing Technology Evaluation

Remote sensing is a technology that has been used as a screening tool to identify high-emitting cars and trucks in California and other states. The Agreement provides that ARB and the railroads will implement a locomotive remote sensing pilot program based on AB 1222 (Jones). AB 1222 was signed by the Governor on October 6, 2005, and will be implemented per the legislation.

2. Agreement to Evaluate Other and Medium-Term and Longer-Term Alternatives.

Both ARB and railroads have agreed to assess developing and future locomotive technologies on a regular basis. As part of this assessment, the railroads have agreed to provide approximately $3.5 million for the study of a number of near-term and longer-term control strategies.

- ***Feasibility study of diesel particulate filters and diesel oxidation catalysts on switcher locomotives.***

ARB and the railroads cooperatively agreed in 2001 to evaluate the feasibility of using diesel particulate filters on older 2-stroke diesel switcher engines. Under the Agreement, ARB and the railroads have agreed to complete by November 1, 2005, an assessment of whether to continue the feasibility study. If continued, both the feasibility study, as well as an assessment of the use of diesel exhaust after-treatment devices in Europe, shall be completed by December 31, 2005. Based on this information, ARB and the railroads will agree to either continue the feasibility study or alternatively, develop a spending plan to invest the remaining funds in the evaluation of additional longer-term mitigation measures.

- ***Additional Longer-Term Mitigation Measures***

There is a need to establish an open public process to evaluate future technology advancements in reducing locomotive emissions. As part of the Agreement, ARB and the railroads will conduct public meetings every six months to solicit and present the latest information on the state of advanced locomotive emission control technologies. After the second technical evaluation, ARB and the railroads, fully considering the comments received from the public meetings, will develop a progress report on the technical evaluation meetings. Potential technologies to be evaluated include:

- Accelerating replacement of line haul locomotives operating outside of the South Coast Air Basin with lower emitting locomotives;
- Retrofitting or rebuilding existing line haul locomotives with lower emitting technology;
- Using other lower-emitting technologies, such as liquefied natural gas or compressed natural gas fueled locomotives, truck engine switch locomotives, or battery/electric hybrid switch locomotives;
- Retrofitting non-locomotive diesel rail yard equipment with diesel particulate filters or other diesel particulate matter emission reduction devices; and
- Using cleaner fuels, including alternative diesel fuels.

3. Compliance Reporting

The Agreement also requires the establishment of program reviews and compliance and program review protocols to ensure that the goals and obligations of the Agreement are being fulfilled.

VII. ENFORCEMENT AND PENALTIES

This chapter discusses the enforcement and penalty provisions of the Agreement. A discussion of the impacts of the Agreement on enforcement of existing State statutes and local air district regulations is also provided.

A. Enforcement of Idling and Visible Emission Repair Provisions

The Agreement specifies the establishment of a training program by ARB for enforcement of the idling provisions of the Agreement, as well as the monetary penalties for violations of the idling provisions.

1. Training Requirements for Enforcement of Idling Provisions

Under the Agreement, ARB will establish a training program for enforcement of the idling reduction program provisions. The use of a statewide training program for the enforcement of the idling provisions will ensure uniform, consistent enforcement across the State. The goals of the training program are to ensure that each inspector enforcing the idling provisions understands the various provisions of the Agreement, including:

- Idling time limitations;
- Differences between essential and non-essential idling;
- Railroad practices on notifying train crews of anticipated delays in excess of 60 minutes;
- Identification of locomotives with idle reduction devices; and
- Procedures for handling violations of the idling provisions, including notification requirement to the railroads upon issuance of a notice of violation.

ARB will develop and provide the necessary training for ARB inspectors and, if local air districts choose to participate in the enforcement of the idling reduction program, ARB will train and certify local air district enforcement personnel. ARB will develop a detailed enforcement protocol no later than December 31, 2005.

2. Penalties for Violations of Idling and Visible Emission Repair Provisions

Beginning September 30, 2005, failure by the railroads to comply with the Agreement's idling reduction program requirements shall be subject to penalties on an individual locomotive basis during each calendar year according to the following schedule:

- $400 for the first violation on any day during a calendar year;
- $800 for the second violation on any subsequent day during the same calendar year; and
- $1,200 for the third and any subsequent violation on any subsequent day(s) during the same calendar year.

In addition, any locomotive that has been identified as having excessive visible emissions under the visible emission reduction and repair program and is neither routed for repair within the State, nor taken out of the State within 96 hours, is also subject to the above penalties.

An appeal process for the railroads is also established under the Agreement. The appeals process involves appeal of a notice of violation to an administrative law judge or mediator for adjudication.

B. Failure to Meet Program Requirements

There are penalties associated with the railroads' failure to implement the necessary steps to meet the performance standards, training, and/or compliance date requirements specified in:

- Installation of Automatic Idling Reduction Devices;
- Idling Reduction Training Program;
- Supply of Lower Sulfur On-Highway Diesel Fuel;
- Establishment of Visible Emission Reduction and Repair Program;
- Review of Operating Practices in Each Designated Yard; or
- Collection of Data for Overall Health Risk Assessment.

Where such failures substantially impair the goals to meet on elements of the agreement, the following penalties apply:

- After 30 calendar days beyond the compliance date: up to $10,000;
- After 60 calendar days beyond the compliance date up to 180 days after the compliance date: up to $20,000 per month; and
- After 180 calendar days beyond the compliance date and beyond: up to $40,000 per month.

The railroads shall be notified if ARB reaches a preliminary determination that a railroad has substantially failed to meet a performance standard, training, and/or compliance date requirement. The railroads shall have 30 days to meet with ARB regarding the failure. If ARB and the railroads fail to agree that the determination is valid, the issue will be referred to an administrative appeals panel.

1. Repeat Violations

If ARB determines that a railroad has repeatedly committed individual violations of the Agreement in a manner that substantially impairs the goals of the Agreement, it shall meet and confer with the railroad. If the pattern of noncompliance is confirmed, ARB may seek the penalties provided in this section. These provisions are designed to respond to ongoing and repeated violations where a railroad may demonstrate over time a lack of commitment to comply with the Agreement's program elements.

2. Unforeseen Circumstances

The penalties provided in this section may be waived due to unforeseen or uncontrollable circumstances (i.e., legally referred to as force majeure) that would prevent a railroad company from complying with the applicable provisions of the Agreement. However, every reasonable effort must be made by the railroad to notify ARB of the circumstances of the noncompliance, and how they intend to achieve compliance in the most expeditious manner.

C. Distribution of Penalties

Any penalties received for violations of program elements specified in this Agreement will be deposited into the Carl Moyer Program account and will be distributed to the local air district where the violation occurred.

D. Existing State and Local Air District Enforcement Authorities

The Agreement does not interfere with or impede any existing enforcement authorities granted under California law. Existing State and local authorities over rail yards and locomotives will not change as a result of the Agreement. This includes statutory authority to cite locomotive operators for visible emission violations as specified under H&SC section 41701, nuisance violations as specified under H&SC section 41700, or any other applicable statute, local air district rule or regulation applicable to locomotives and rail yards.

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VIII. COMMUNITY INVOLVEMENT

This chapter describes numerous opportunities for public involvement in implementation of elements of the Agreement. As part of the Agreement, ARB, UP and BNSF have committed to an extensive process of outreach and communication with local communities and local air districts. The railroads and ARB are committed to considering the comments and suggestions received from the local air districts and communities when fulfilling their obligations to meet and confer in the future under the terms of the Agreement.

A. Reporting of Idling and Smoking Locomotives

The Agreement requires the railroads, in conjunction with ARB and after seeking input from local residents, to establish a process at each covered yard in the State for informing members of the community regarding how they can report excessively idling or smoking locomotives. This process shall also provide for a response to the community on what actions have been taken by the railroad to address any identified problems.

1. Railroad Complaint Process

Both railroads have previously established procedures to process, handle, and respond to community member complaints. Both railroads utilize phone call centers to receive and record complaints. The call center phone numbers for each railroad are:

- **Union Pacific Railroad**
  1-888-UPRRCOP or 1-888-877-7267

- **BNSF Railway**
  1-800-308-7513

Each complaint received generates a complaint report, which is forwarded to the appropriate railroad operations, environmental, or safety management personnel. Management reviews the complaints and based on the type of complaint and need for action, assigns the appropriate railroad staff to investigate the complaint and correct the problem. Staff intends to work with the railroads and local communities to evaluate the railroads existing process, and develop recommendations on how the system can be more responsive and accountable, including protocols for notifying individuals who file a complaint on the findings of the railroads investigations and any corrective actions taken.

2. ARB and Local Air District Complaint Process

To supplement existing ARB and local air district complaint procedures, staff has also begun to cooperatively develop with local air districts a community reporting process for

idling and smoking locomotives. As the first step, staff has developed a new web page at: http://www.arb.ca.gov/railyard/railyard.htm to provide information on the ARB's activities at rail yards. As part of that webpage, staff has provided ARB and local air district contact information for the community to report smoking or idling locomotives. This includes a statewide number to contact staff (1-800-END-SMOG), and local air district contact information for both the Designated and Covered Rail Yards, as well as for other areas of the State.

ARB and local air districts have also begun to work together to design and implement a statewide program to respond to complaints from community members about rail yards, locomotives, or any other railroad related emissions issues. Staff initiated a meeting in early September 2005 with local air districts to discuss how to design and implement a statewide rail yard complaint process, including how to best utilize the individual rail yard Program Coordinators identified by the railroads. Over a dozen local air districts participated in the meeting. Further meetings with local air districts will be scheduled in the near future to develop and finalize the development of this program.

B. Health Risk Assessments at Designated Rail Yards

As previously discussed, under the Agreement, the railroads and ARB, with full opportunity for input from local air districts and community members, will work together to develop criteria for required information in the health risk assessments, compile the necessary emissions inventories and data, and prepare draft and final HRAs for each of the designated yards. Local air districts and local community members will be requested to be actively involved in reviewing and commenting on each component of this program element.

1. Health Risk Assessment Guidelines Development

ARB will continue to work collaboratively with local air districts, the railroads, and community members to develop consistent, comprehensive, and accurate guidelines for use in performing HRAs for the Designated Rail Yards and for other sources in the affected communities statewide.

2. Health Risk Assessment Findings

Upon completion of the draft HRA for each Designated Rail Yard, ARB and the railroads shall meet with representatives from the affected community and the local air district to discuss the results. After receiving comments on the draft HRA from all participants, ARB and the railroads will finalize the HRA findings. After the HRA is finalized, ARB and the railroads will hold meetings within 60 days to discuss the findings and the concerns of the community and local air district, and to identify potential mitigation measures.

C. Review of Air Emission Impacts from Rail Yards

The railroads must review the air emissions from each of the Designated Rail Yards by November 1, 2005. Based on the emissions assessments, the railroads will develop a plan for each respective Designated Rail Yard to implement feasible changes that could lessen the impacts of these emissions in adjacent residential neighborhoods. The railroads must meet with members of the community and local air districts to discuss the plan. As part of these meetings, the railroads must consider the concerns of the community and potential ways to address their concerns regarding the operations and emissions impacts of the Designated Rail Yards. The plan shall be reflective of these concerns to the fullest extent possible.

Upon meeting with the communities and local air districts after completion of a draft HRA for a Designated Rail Yard, the railroads will update their respective plan for each rail yard to reflect the concerns of the community and to reduce the emissions impact of operations of the Designated Rail Yard. These plans must also be updated annually through meetings with ARB, the local air district, and community member representatives near each Designated Rail Yard. At these meetings, the railroads are to provide a progress report on their implementation of risk mitigation measures at each Designated Rail Yard, which will include any new alternative practices or other feasible actions that have been implemented. At these meetings the local air districts, community members, and ARB may ask questions and make comments on the railroads' progress reports, which the railroads will fully consider.

D. Agreement to Evaluate Other and Medium-Term, and Longer-Term Alternatives

To ensure that the evaluation and implementation of feasible mitigation measures continues expeditiously to reduce locomotive and associated rail yard emissions, ARB and the railroads will meet no less frequently than every 6 months to discuss the technical evaluation of future potential measures. These technical evaluation meetings will be held at a convenient time and place. Community leaders, local air districts, and other interested parties will be invited to attend these meetings and present their perspectives.

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IX. BENEFITS OF THE AGREEMENT

This chapter describes the substantial benefits of the Agreement to local communities through reductions in locomotive diesel PM emissions in and around rail yards throughout the State.

A. Overall Emission Benefits

Staff estimates that the Agreement will, over the next 15 months, produce about a 20 percent reduction in locomotive diesel PM emissions in and around rail yards throughout the State. These benefits result from the Agreement's idling restrictions, inspection and repair provisions, and the required use of cleaner, ultra-low sulfur (less than 15 ppm) on-road quality diesel fuel with locomotives fueling in California. The benefit of each of these program elements is provided below in Table IX-1.

Table IX-1:
Diesel Particulate Emission Benefits of the Agreement

Program Element	Percent Reduction in Diesel PM
Idling restrictions/Anti-idling devices	10%
Visible emission inspection & repair	3%
Ultra-low sulfur diesel fuel	7%
Total Benefits	20%

In addition, the Agreement also requires the evaluation and implementation of risk reduction mitigation measures at Designated Rail Yards. This will provide additional, unquantified emission benefits beyond those identified in Table XI-1.

B. Idling Reduction Emission Benefits

Staff estimates that the Agreement will provide an estimated 10 percent reduction in locomotive diesel PM emissions from idling near rail yards. This is a result of both requirements for the installation of idle reduction devices, and new statewide idling restrictions.

In calculating the emissions benefits, staff based their analysis on the findings of the Roseville Rail Yard Study, which indicated that idling from all locomotives in the rail yard accounted for about 45 percent of the diesel PM emissions. In the Roseville Rail Yard Study, idling emissions were segregated by activity type (e.g., hump, trim, maintenance, fueling, switching, etc.), with discrete idling durations prescribed to each activity type. Staff used this data to evaluate what impacts the idling reductions specified in the Agreement would have on the diesel PM emissions associated with idling at the Roseville rail yard.

Staff segregated the different idling activities in the Roseville Rail Yard Study into essential and non-essential idling, as defined in the Agreement. Staff then assumed that all non-essential idling would be limited to 60 minutes for interstate locomotives, and 15 minutes for intrastate locomotives. Using this approach, staff estimates that overall idling at the Roseville rail yard would have been reduced by 25 percent under the idling provisions of the Agreement. This provides a corresponding 25 percent reduction in diesel PM emissions associated with idling, or a corresponding 10 percent reduction in total diesel PM emissions from the Roseville rail yard.

These emission benefits will be further enhanced in the future as line haul locomotives are equipped with anti-idling devices, either through the purchase of new, Tier 2 locomotives which are manufactured with these devices already installed, or through the retrofit of existing, in-use locomotives.

C. Early Introduction of Low Sulfur Diesel Fuels Emission Benefits

Staff estimates that the early introduction of ultra-low sulfur (15 ppm) diesel fuels into the locomotive fleet will provide at least an estimated 7 percent reduction in diesel PM emissions in and around rail yards.

Federal on-road diesel fuel is the primary diesel fuel currently supplied to locomotives fueled in California. Ultra-low sulfur diesel fuel relative to current federal on-road diesel fuel would provide about a 5 percent reduction in diesel PM emissions from locomotives. Based on information from the Roseville Rail Yard Study, staff estimates that line haul locomotives represent about 67 percent of the total diesel PM emissions from the Roseville rail yard. Also, since line haul locomotive fuel tanks typically have residual fuel in them (estimated to be about a third of a tank) when they are refueled in California, these locomotives are only filled to about 67 percent of their capacity while within California. Based upon this information, staff estimates that the use of ultra-low sulfur diesel fuel in line haul locomotives will provide about a 2 percent reduction in diesel PM emissions. These reductions will be further enhanced to the extent that the ultra-low sulfur diesel fuel used is California diesel fuel, which provided additional diesel PM emission benefits relative to federal on-road diesel fuel.

These reductions complement the anticipated reduction in diesel PM associated with the recently approved requirements for the use of California diesel fuel in intrastate locomotives. Staff estimate that this requirement will reduce diesel PM emissions in and near rail yards by about 5 percent.

D. Visible Emission Reduction and Repair Program Emission Benefits

The railroads currently estimate that both their interstate and intrastate locomotives operating in California achieve a 98 percent compliance rate for meeting existing visible emission standards. The visible emission reduction and repair program of the Agreement requires both railroads to achieve a 99 percent compliance rate and to repair, within 96 hours, those locomotives identified as excessively smoking. This will

reduce the incidence of locomotives with excessive emissions by 50 percent from current levels.

Staff estimates that a locomotive with excessive visible emissions can have diesel PM emissions significantly greater than a properly operating locomotive. By reducing the incidence of these locomotives operating in the State, staff estimates that this will provide about a 3 percent reduction in locomotive diesel PM emissions near rail yards.

E. Potential Emission Reduction Impacts Associated with Rescinding the Agreement

The Agreement provides significant and immediate locomotive emission reductions that are needed to reduce exposure and risk around rail yards. Rescinding the Agreement will forfeit these emission reductions. There is little likelihood that they would be restored through a second negotiation with the railroads. Alternatively, rules approved by ARB or local air districts to control locomotive emissions would likely be challenged in court and possibly preempted, resulting in no emission reductions. At a minimum, the implementation of any ARB or local air district rule that successfully withstood a legal challenge would be significantly delayed. This would result in little or no emission reductions in the intervening period, as opposed to the immediate emission reductions provided by the Agreement.

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X. PUBLIC COMMENTS AND CONCERNS WITH THE AGREEMENT

This Chapter provides a summary of the public consultation meetings, and also summarizes the comments received and staff's responses.

A. Public Consultation Meetings on the Agreement

Upon direction of the Board, staff held two public consultation meetings to solicit public comment on the Agreement. One meeting was held on August 10, 2005 in Sacramento and the second on the evening of August 31, 2005 in Commerce. Staff presented information on the program elements of the Agreement, discussed key issues, and accepted both verbal and written public comments. At both meetings, staff provided Spanish translation services to those who needed it.

Approximately 100 people attended the meeting in Sacramento, and over 250 people attended the meeting in Commerce. Eighty-eight people testified on the Agreement, including 30 persons testifying as individuals or members of community groups, 28 elected officials, 7 representatives of local air districts, 18 environmental organizations, and 5 representatives of business groups, including the UP and BNSF railroads. Table X-1 lists the 24 communities represented by individuals who testified at the meetings.

Table X-1:
Communities Represented by Individuals Testifying at the Public Consultation Meetings

Alhambra	Commerce	Pasadena	Norwalk	Santa Monica
Bell Gardens	Colton	Pico Rivera	Oakland	South Gate
Bradbury	Compton	Mira Loma	Ontario	Temple City
Chino	Los Angeles	Montebello	Rosemead	Wilmington
Claremont	Long Beach	Newhall	San Bernardino	

A list of the individuals who testified at the meetings, who they represented, and their position on the Agreement, is provided in Appendix C. Appendix D provides a list of all of the individuals who noted their attendance at the meetings by placing their names on the sign in sheets provided.

Staff responses to these comments are provided below. A complete listing of the individuals and organizations that submitted written comments, and their position on the Agreement, is provided in Appendix E.

B. Public Comments and Concerns with the Agreement

A large majority of those providing testimony expressed opposition to the Agreement and requested that the Board rescind the agreement. Many comments suggested that if the Agreement is not rescinded, it should be modified in various ways. Nearly all of these comments were received from residents and elected officials from southern California, as well as from SCAQMD staff. The stated basis for this position is a belief that the development of the Agreement was flawed, and that its substance is weak. Many of these commenters have also indicated that more effective measures that could have been approved by the Legislature or local air districts were stalled or withdrawn due to the Agreement.

Staff has received comments from businesses in support of the Agreement and other local air districts that conditionally support the Agreement. These comments are supportive of the Agreement's ability to achieve emission reductions from a source category that is significantly preempted under federal law from local and State regulation, and reflect a belief that proposing a regulatory approach to achieving these benefits is vulnerable to significant legal challenge and extended litigation, with no guarantee of ultimately achieving any emission benefits.

Staff has summarized the comments received into ten broad comments:

- The Agreement should be rescinded;
- The Agreement was inappropriate and bad public policy;
- The Agreement is not necessary;
- The Agreement caused pending legislation to be withdrawn;
- The Agreement interferes with local rulemakings;
- The release clause should be removed;
- The Agreement is not stringent enough;
- The Agreement interferes with enforcement of existing laws and regulations;
- The Agreement is not enforceable; and
- The penalties in the Agreement are not consistent with State law.

1. *The Agreement is so flawed that it should be rejected by the Board and rescinded.*

The Agreement will obtain significant locomotive emissions reductions that are needed to reduce exposure and risk around rail yards. Rescinding the Agreement will forfeit these reductions. There is little likelihood that they would be restored through a second negotiation.

2. *It was inappropriate and bad public policy for the railroads and ARB to reach such an agreement with no opportunity for public comment and input. The exclusion of the public from the development process violated the Board's commitment to Environmental Justice and open participation.*

The Agreement was a negotiated document, entered into voluntarily between the railroads and ARB. There are wide differences among other parties regarding both the acceptable content and appropriateness of any voluntary agreement dealing with railroad operations. Staff concluded it would be impossible to directly involve interested parties in the negotiations and reach any meaningful agreement. Because public participation is critical at individual rail yards, the elements of the Agreement provide for significant community interaction, which had not occurred to date. Staff viewed the other aspects of the agreement (idling, clean fuels and smoke reduction), whereby the railroads committed to statewide, unilateral actions to reduce emissions, as purely positive steps that could be pursued without extensive public debate.

To address concerns raised in regards to the lack of public process during the development of the Agreement, the Board resolved at its July 2005 meeting that they and the public be notified prior to commencing any MOU negotiations and that the Board approve all future negotiated agreements before they become effective. With this action, the Board has ensured that both they and the public will be aware of any future agreements, while recognizing the use of negotiated agreements as a useful air pollution control tool, especially from sources where direct regulatory authority is uncertain. The Board also decided to review the current Agreement in a public Board meeting which is scheduled for October 27, 2005.

3. *It was not necessary for ARB staff to enter into an agreement with the railroads because ARB already has the legal authority to adopt regulations that achieve the same goals as the Agreement.*

The California Legislature has granted ARB broad authority to regulate locomotive emissions, and has specifically directed the ARB to achieve the maximum degree of emission reductions by the earliest practicable date from off-road equipment and vehicles, including locomotives. However, while this authority under State law is quite clear, preemption limitations at the federal level, which are supreme to State law, restrain the ability of ARB to engage in a regulatory approach relative to railroad emissions. As previously discussed, these limitations result from several federal statutes, including the federal CAA and the ICCTA, as well as the United States Constitution. These limitations provide that the Agreement, as opposed to regulation, was the preferable course of action to ensure timely and certain emission benefits from railroad operations.

4. *The Agreement caused pending legislation supported by the South Coast District, environmental and community groups to be withdrawn. The ARB should modify its opposition to these bills and support their passage as the appropriate mechanism to reduce emissions from railroad operations.*

There were three bills in this year's session of the Legislature that focused on pollution from railroad operations. The Administration opposed two of these bills: Assembly Bill (AB) 888 and Senate Bill (SB) 459. However the opposition to these bills is not related to any element of the Agreement, and ARB's position would have been the same in the absence of negotiation of the Agreement.

AB 888 (De La Torre) addresses emission controls for diesel equipment at rail yards. The Agreement does not address the subject matter of AB 888. ARB opposed this bill because the ARB is proposing a statewide rulemaking to address emission controls for diesel-powered cargo handling equipment that applies to intermodal facilities. The Board will consider this rule in December 2005. Staff is also developing more broad regulations for off-road engines and equipment throughout the State, which will include non-intermodal rail yards, that the Board will consider in 2006. The Administration opposed AB 888 because it duplicates ARB's pending rulemakings.

Senate Bill 459 would impose mitigation fees on the railroads. The Administration opposed Senate Bill (SB) 459 (Romero) on the grounds that it is federally preempted, will invite litigation, and, if signed, could invalidate the 1998 MOU. Such an action would jeopardize substantial emission reductions in the South Coast Air Basin. SB 459 has no direct relationship to the contents of the 2005 Agreement.

The remaining bill, AB 1222 concerns remote sensing of locomotives and is anticipated by and consistent with the Agreement. AB 1222 was signed by the Governor on October 6, 2005, and will be implemented per the legislation.

5. *The Agreement interferes with local rulemakings and is counter to the principle that local agencies have the right to pursue more stringent requirements than required statewide.*

The Agreement does not limit or restrict any existing authority for local air districts. Local air districts maintain their authority to adopt appropriate rules and regulations consistent with the scope of their regulatory authority under state and federal law. Recognizing this, one local air district has initiated rulemaking efforts under its state authority to require health risk assessments at rail yards within its boundaries, and to limit locomotive idling. However, these actions, especially as they relate to locomotive idling restrictions, are questionable under federal preemption.

The Agreement provides benefits that could be lost if local air districts decide to exercise the state authority they have. Therefore, each agency will need to consider this factor prior to taking actions that overlap with the statewide Agreement.

Because railroad and rail yard operations and their associated emission impacts are statewide, staff believes there is substantial merit in taking a uniform approach relative to many aspects of rail operation. This approach is consistent with many California air pollution control programs addressing statewide sources, including fuel specifications, motor vehicle emission standards, and consumer products. A statewide approach also provides a uniform set of compliance requirements for railroads, allowing them to more effectively manage their operations and train employees to meet emission reduction obligations. This is important since train crews can traverse many different parts of the state over a short period of time, and compliance with a patchwork of different operational standards in different parts of the state would be very difficult and cumbersome for the railroads to observe.

6. *The release clause should be deleted (the release clause allows the railroads to opt out of portions of the agreement if subject to overlapping local control. It is usually referred to by commenters as the "poison pill".)*

The railroads operate nationally and believe uniform operating requirements throughout the state are essential for a consistent and efficient mechanism to implement operational changes that produce emission reductions. Because of this, during the negotiations, the railroads indicated that any agreement had to ensure that they would not have to comply with multiple requirements within the State. Staff does not believe that the railroads would have entered any agreement that could obligate them to two overlapping, and potentially inconsistent methods of control.

Much of the concern about the release clause is based on the ability of the railroads to apply it on a statewide basis, even if overlapping requirements are being pursued in only one area. The railroads would incur significant risk in exercising this option, knowing that other local air districts could decide that it is in their interest to adopt their own local regulations. This could result in a patchwork of different regulations within the state. If the railroads decide to opt out of an element of the Agreement because of a local action, staff believes that the best course is to work with the railroads to convince them it is in their interest to implement the Agreement in all other areas.

7. *The Agreement is not stringent enough.*

The Agreement achieves very significant reductions and represents the maximum commitment staff could obtain through negotiations. The Agreement achieves emission benefits where they would otherwise be difficult or impossible for the ARB or local air districts to obtain via regulation. Staff believes that most of what could be achieved, with respect both to content and timing, is included in the Agreement.

Since many of the program elements of the Agreement are potentially preempted, the Agreement arguably achieves emission benefits that would otherwise be difficult for the ARB or local air districts to obtain with any certainty. Without the Agreement, benefits realized through actions that would otherwise be preempted would only be achieved through action by the U.S. EPA.

However, it is uncertain at this time when the U.S. EPA may promulgate regulations that address idling, risk mitigation at rail yards, or the evaluation of future technologies. The Agreement ensures that these elements are implemented in the near term, with opportunities for the program elements to be superseded by more stringent action at the federal level.

8. *The Agreement interferes with enforcement of existing laws and regulations.*

ARB and local air districts' authority over rail yards and locomotives to enforce existing laws and regulations will not change as a result of the Agreement. This includes statutory authority to cite locomotive operators for visible emission violations as specified under Health and Safety Code section 41701, nuisance violations as specified under Health and Safety Code section 41700, or any other applicable statute, local air district rule or regulation applicable to locomotives and rail yards that is not subject to federal preemption. The Agreement provides an additional tool for ARB and local air districts to use to ensure that railroads are implementing appropriate measures to reduce their emission impacts.

9. *The Agreement is not enforceable.*

The Agreement is enforceable at both the state and local level. Some elements, such as the locomotive idling provisions, can be enforced through direct enforcement by either ARB or local air district staff upon completion of ARB developed enforcement training. Others, such as failure to comply with the repair requirements for locomotives with excessive visible emission, are subject to enforcement action allow staff to ensure, on a regular basis, that the requirements of the Agreement are implemented. Violations of any of these provisions can result in escalating penalties that can become quite substantial based on the number of locomotives involved and the number of days over which the violation occurred.

Failure on the part of the railroads to implement the necessary steps to meet the performance standards, training, or compliance date requirements of the Agreement can result in even more substantial penalties. Staff will monitor compliance with all provisions of the Agreement, and seek penalties as appropriate for failure to comply.

10. ***The penalties provided in the Agreement are not consistent with those provided in state law for violations of air pollution laws and regulations from other air pollution sources.***

Staff believes the penalty structure of the Agreement is adequate to ensure that the railroads fully implement and meet their obligations under the Agreement. This includes penalties of up to $1,200 per locomotive, per day, for both individual violations of either the idling or smoking locomotive repair provisions, as well as more substantial penalties of up to $40,000 per month for failure to implement specific program elements.

While these penalties are not as significant or prescriptive as is provided under the Health and Safety Code for violations of state or local regulations, they represent the level of punitive action railroads would agree to for failure to meet any of their obligations under the Agreement. Also, staff believes these penalty amounts are consistent with the penalty assessments local air districts have collected through mutual settlement agreements with other sources under their jurisdiction for comparable emission violations.

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XI. Activities Already Underway to Implement the Agreement

This chapter discusses the initial activities of the staffs of the both the ARB and railroads to begin the implementation of the Agreement.

A. Railroad Implementation Efforts

The railroads have already begun to implement certain program elements, including providing required information to ARB.

1. Idling Reduction Program

Both railroads have submitted their lists of idling reduction Program Coordinators. These lists identify those railroad employees who will be responsible for the implementation of the idling reduction programs for all of the Designated and Covered Rail Yards.

Both UP and BNSF have also submitted their inventories of intrastate locomotives. This information will be used by staff to update the number and location of intrastate locomotives operated by UP and BNSF in the state. This information will also serve to establish the baseline for determining the number of intrastate locomotives with and without idle reduction devices, and the number of locomotives that must be retrofitted with anti-idling devices over the next three years.

Under the Agreement, both railroads had the opportunity to submit to ARB a more detailed list of necessary maintenance activities that require essential idling. Both railroads have declined to do so, eliminating any opportunity for the railroads to later argue that nonessential idling meant something more than was expressly set forth in the Agreement.

2. Visible Emission Reduction and Repair Program

Both railroads have submitted their lists of visible emission Program Coordinators. These lists identify those railroad employees who will be responsible for the implementation of the visible emission reduction programs at each of the Designated and Covered Rail Yards.

Both railroads have also submitted their plans to establish a visible emission reduction and repair program. Staff has begun to complete a full review of these plans. Staff will provide an assessment of these plans as part of an update to the Board.

3. Training Programs

Both railroads have submitted their plans to train appropriate rail yard staff and train crews on the idling requirements of the Agreement, and the individual visible emission

reduction and repair program plans. Staff has begun to complete a full review of these plans, and will provide an assessment of these plans as part of an update to the Board.

4. Railroad Complaint Process

Both railroads have submitted their plans to develop a process for informing members of the community regarding:

1) How community members can report excessively idling locomotives and locomotives with excessive visible emissions to each railroad; and
2) How each railroad will notify community members of what corrective action(s) have been taken by the railroad to address any complaints.

Staff has begun to review both the UP and BNSF plans. Staff intends to work with the railroads, local air districts, and local communities to evaluate the railroads' process, and develop recommendations to ensure that the system is responsive and accountable.

B. ARB Implementation Efforts

Staff has already begun to implement certain program elements of the Agreement. These implementation efforts have included a substantial amount of outreach and involvement with local air districts to invite participation and develop cooperative strategies to address rail yard and locomotive emission impacts.

1. Meetings with Local Air Districts

Staff has met with the staff of the local air districts that contain a Designated Rail Yard. These meetings were intended to discuss the program elements of the agreement and to seek air district input on the implementation and community involvement components. Staff has met with the following local air districts:

- Bay Area Air Quality Management District;
- Mojave Desert Air Quality Management District;
- Placer County Air Pollution Control District;
- Sacramento Metropolitan Air Quality Management District;
- San Diego County Air Pollution Control District;
- San Joaquin Valley Unified Air Pollution Control District;
- South Coast Air Quality Management District; and
- Yolo-Solano Air Pollution Control District.

Staff has briefed a number of other air districts at recent meetings of the California Air Pollution Control Officer's Association, and has offered to meet individually with any other interested local air district. Staff has also provided information on the Agreement to the Locomotive and Rail Sector Working Group of the West Coast Collaborative.

2. Development of an ARB Rail Yard Website

On August 1, 2005, staff established a "Rail Yard Emission Reduction" website at: http://www.arb.ca.gov/railyard/railyard.htm. This website is intended to provide information to the public about the ARB's ongoing efforts to reduce the emission impacts of rail yard operations, including staff's activities to implement the Agreement and other related railroad information. Key information provided on the Rail Yard Emission Reduction website includes:

- What's new;
- Upcoming events and meetings;
- How to file a complaint, including contact information for railroads, ARB, and local air districts;
- Information on the Agreement, including a copy of the Agreement and fact sheets;
- Information on the DRRP and associated activities;
- Rail yard HRAs;
- Links to websites operated by the railroads, locomotive manufacturers and government agencies with jurisdictions over railroad activities; and
- Information on the ARB's locomotive activities, including information on the 1998 MOU, California diesel fuel requirements for intrastate locomotives, and U.S. EPA's locomotive emission standards program.

3. Designated Rail Yard Visits

Staff worked with UP and BSNF to visit a significant number of the Designated Rail Yards. The purpose of these visits was to observe the overall operations and the relative level of activity at each rail yard, and the proximity of residences and other businesses to the rail yard and nearby arterial highways and freeways. The rail yards visited are provided below in Table XII-1.

Local air district staff was invited to participate in the site visits. In northern California, the Bay Area Air Quality Management District (BAAQMD) was unable to attend due to a scheduling conflict. Staff will arrange to reschedule site visits for staff of the BAAQMD. In southern California, SCAQMD staff participated in all rail yard visits. Staff also plans to work with both railroads and local air districts to schedule visits to the remaining Designated Rail Yards later in the fall of 2005.

Table XII-1:
Designated Rail Yard Site Visits

Rail Yard	Operator
Commerce	UP
LATC	UP
Commerce/Eastern (including Commerce Mechanical)	BNSF
Colton	UP
San Bernardino	BNSF
Mira Loma	UP
Oakland	UP
Richmond	BNSF
Hobart	BNSF
Watson	BNSF
ICTF	UP
Dolores	UP
Industry	UP

4. Development of a Locomotive Complaint Program

As was previously discussed, staff has also begun to cooperatively develop with local air districts a statewide community reporting program for idling and smoking locomotives. Staff initiated a meeting in early September 2005 with local air districts to discuss how to design and implement a statewide rail yard complaint process, including how to best utilize the individual Program Coordinators identified by the railroads. Over a dozen local air districts participated in the meeting. Further meetings with local air districts will be scheduled in the near future to finalize the development of this program.

5. Enforcement Training

Currently, ARB training staff offers a visible emission evaluator program. This three-day course is a basic overview of air pollution, emphasizing visible emissions evaluation. Participants are trained to read visible emissions and will have the opportunity to obtain visible emissions evaluation certification. This certification is valid for six months and recertification must be obtained twice a year. Additional topics include air pollution and its effects, meteorology, water vapor plumes, air pollution law, inspection procedures, and diesel smoke enforcement. ARB training staff has contacted both UP and BNSF regarding this course offering to ensure that the appropriate railroad staff has the required visible emission certifications required in the Agreement.

Also, as part of the locomotive idling enforcement provisions of the Agreement, ARB is responsible for developing and conducting a training program for ARB and local air district enforcement staff. ARB training staff has already begun the development of this program. As part of the program development, ARB training staff will review the training programs developed by UP and BNSF so that enforcement staff are knowledgeable

about the railroads' standard operating procedures regarding locomotive idling. Once the development of the ARB idling enforcement training program is complete, ARB training staff will begin to offer locomotive idling enforcement training to ARB and local air district enforcement staff.

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